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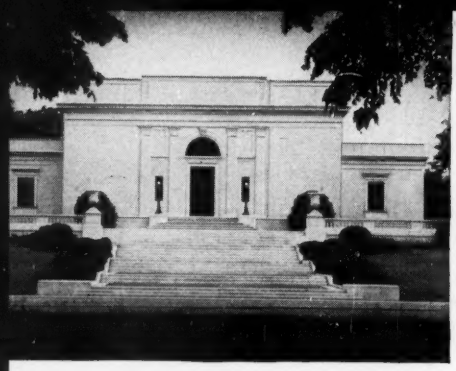


STRAIGHT FROM HEADQUARTERS

By *ROBERT P. FISCHELIS*, Secretary
AMERICAN PHARMACEUTICAL ASSOCIATION

Medical Care Programs

As soon as the results of the November elections became known, speculation began as to the effect of the election of President Truman on the proposed National Health Program. Those who are opposed to participation of the federal government in health matters have started a strong campaign against what they consider socialization of medicine. Those who are in favor of compulsory health insurance have let it be known that they expect the Congress of the United States to enact legislation furthering such a program, which they claim is the only sure method for making modern medical care available to all people regardless of the size of their income. It is unfortunate that a problem of such great importance to the welfare of the American people cannot be considered in an atmosphere of calm discussion and that all concerned cannot pool their efforts to evolve a program which will provide for the people the highest quality of medical care under circumstances which are satisfactory for both the patient and the physician.

As a people we have been able to provide for many social services through the cooperation of citizens and those trained to supply these services, and we should have no difficulty in solving the problem of making medical care available to all who need it, under circumstances which will maintain the dignity of the individual, be he the recipient or the provider of the necessary medical services. It is unworthy of the professions as well as of those who are sincerely anxious to provide an American system of medical care which will be equitable and satisfactory to all concerned, to indulge in name calling and recriminations at a time when their combined efforts are necessary to solve what has come to be regarded as one of our greatest social problems.

American pharmacy, as far as the practicing pharmacist is concerned, has kept itself in the position of meeting its responsibilities under any system of medical care which the American people may decide upon through their representatives in Congress. It should keep itself in that position and not take sides in controversies which becloud the real issue. It must be remembered that the parties at interest include patients as well as doctors. The method of payment for medical care is, after all, the concern of every individual who is or may become sick and that means every man, woman and child in the United States. At the proper time, pharmacy should throw the weight of its influence on the side of keeping the members of the health professions in a position to exercise their respective functions free from political control and responsive to the highest ethical considerations and the interest of the sick. It should be possible to work out acceptable methods of payment for professional services rendered if good faith and common sense prevail on all sides.

National Pharmacy Week

THE Council has approved the proposal of the Committee on Public Relations for the observance of National Pharmacy Week in 1949 during the week of the A. PH. A. convention. Therefore, National Pharmacy Week will be observed April 24 to 30, inclusive, and we will have the advantage of nation-wide radio broadcasts from the A. PH. A. convention at Jacksonville, Florida. The headliners of the convention will become the principal radio speakers during Pharmacy Week, thus focusing public attention on pharmacy's major professional effort at a time when we can give it maximum play.

Arrangements have been made to cooperate again with the American Cancer Society and 1949 Pharmacy Week, like its two immediate predecessors, will be dedicated to the Cancer Education Program. Pharmacists are beginning to recognize the important part they are playing in the effort to accomplish early recognition of cancer and they are now firmly identified in the minds of public health agencies and the general public as major factors in this great crusade.

The time will come when the public and health agencies everywhere will turn more and more to the pharmacy as a source of educational material on all kinds of health programs. This will go far in restoring public confidence in the altruistic health-mindedness of the pharmacist despite the makeup of some of the establishments in which pharmacy is practiced.

It is to be hoped that in the planning of new pharmacies and in the renovation of existing establishments, a section will be set aside for permanent use in storing and distributing authoritative health information.

Year 'Round Health Programs

THE success of the continuing program of cancer education which followed the inauguration of the policy of devoting National Pharmacy Week to an important health movement leads us to suggest that window display facilities should be kept available continuously for good health and civic programs in all pharmacies.

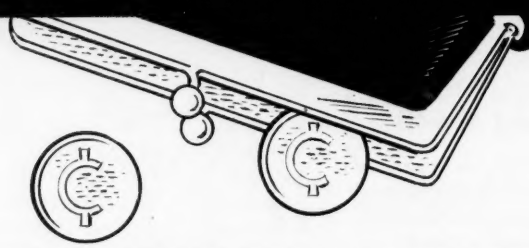
For the month of February there are two special events which pharmacists have previously supported and should certainly support in 1949. The first of these is Social Hygiene Day observed on February 2, 1949, which calls attention to the program of the American Social Hygiene Association for the eradication of venereal disease. Display material will be made available for this occasion in due course.

A second highly important program to be stressed from February 7 to 28 is that of the American Heart Association which will call attention to the prevalence of heart disease and the opportunity for help to those affected if there is early recognition. Harold E. Stassen is the national campaign chairman of the Association and he has addressed a message to the pharmacists of America which will come to them directly through state pharmaceutical associations. "As a guardian of the public health," says Mr. Stassen, "the pharmacist can help present the essential facts about heart disease to the public."

Memorial to Dr. Kelly

IT IS very gratifying to note that the Maryland Pharmaceutical Association is planning to dedicate its headquarters building to be erected in Baltimore to the memory of Evander F. Kelly, for many years dean of the University of Maryland College of Pharmacy, Secretary of the Maryland Pharmaceutical Association and later secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION.

With characteristic drive and efficiency, Dr. H. A. B. Dunning has spearheaded the campaign for funds for the Maryland Association headquarters building and it is highly gratifying to note that pharmacists of that state and local pharmaceutical associations have supported this effort so generously, that it will be a fitting memorial to one of pharmacy's great leaders. The AMERICAN PHARMACEUTICAL ASSOCIATION has had in course of preparation a memorial volume containing tributes to Dr. Kelly prepared by a number of his associates and friends. It is now planned to issue this publication as a part of the dedication ceremonies when the Maryland building is completed. Friends of Dr. Kelly who may wish to contribute to the Maryland memorial should communicate with Dr. Dunning or Mr. Melville Strasburger, secretary of the Maryland Pharmaceutical Association.



DRUG STORE PROPRIETORS RESPONSIBILITIES UNDER THE FEDERAL, STATE AND LOCAL TAXES ON RETAIL SALES

Presented by PAUL C. OLSEN to the Section on Pharmaceutical Economics, AMERICAN PHARMACEUTICAL ASSOCIATION, *1948 meeting.*

SINCE April 1, 1944, the tax rate for cosmetics and toilet preparations has been 20% of the retail price. This rate also applies to jewelry, most clocks and watches, designated ornamented articles, and furs and articles made chiefly of fur. A tax at the rate of 10% of the retail price was put in effect originally on October 1, 1941. The change to the 20% rate on April 1, 1944, was a "temporary" wartime increase. The announced purpose was to discourage civilian expenditures for all but the most essential needs. The rate increase was also announced as a means to discourage use of scarce materials for less essential purposes. As a further move in this direction on April 1, 1944, the tax rate on luggage was changed from 10% of the manufaturer's price to 20% of the retail price. Finally, women's handbags, wallets and various other small leather goods were made subject, for the first time, to a tax on the retail price. The rate on these articles was set, too, at 20%.

A Federal tax is sometimes found now to be separately stated as part of the retail price of various other articles. Such a practice is followed, for example, with respect to electric light bulbs, typewriters and photographic apparatus and supplies. The tax in these instances is a manufacturer's excise. Its separate statement as part of the retail price is merely an attempt to make the price of the article seem less to purchasers than actually is the case. The practice of stating the manufacturer's excise as a separate component of the retail price has also tended to reduce retailers' and wholesalers' margins on such articles. Neither the customary wholesale or retail margin is added, ordinarily, to the separately stated manufacturer's excise. If it were regarded as part of the purchase cost to wholesalers and retailers, as it properly should be, the wholesale and retail margin would be computed on the combined total of the purchase price of the article and the manufacturer's excise tax on it. If the practice of separately stating the manufacturer's excise tax should spread to the wholesale and retail price of cigarettes and other tobacco products, the already minuscule margins of retailers and wholesalers of these articles would just about disappear. Neither retailers nor wholesalers in the drug trade have any liability to account for or pay to the Internal Revenue Bureau such manufacturer's excises unless they are also manufacturers.

The responsibilities of wholesalers in the drug trade for collection and accounting for the four groups of retail excise taxes are limited to those sales which as an accommodation or otherwise are made at retail. Sales to barber shops and beauty shops are designated in Section 2402 (*b*) of the Internal Revenue Code as sales at retail and thus subject to the 20% tax. These establishments may claim a refund on any resales by them of articles on which the tax has been paid at the time of purchase by the barber shop or beauty parlor. Sales to barber shops and beauty shops are customarily made by wholesalers. Thus wholesale druggists have the responsibility of collecting and accounting for the tax as "retailers."

Methods of Accounting

Neither the Internal Revenue Code nor the Internal Revenue Bureau regulations specify any particular method to be used by taxpayers to account for sales at retail of articles subject to a Federal tax on the retail price. Section 320.62 of Regulations 51 says, "Every person required to file a return and pay tax on the sale of an article at retail shall keep on file at his principal place of business, or some other convenient or safe location, accurate records and accounts of all transactions." This requirement presents no special problem to such wholesalers in the drug trade who make taxable sales at retail. Likewise, there is no special difficulty in retail establishments in which an individual sales check is prepared for each transaction. On the other hand, the great number of transactions of small unit amount that are characteristic of the retail drug trade and of many other retail establishments dealing in articles subject to Federal excise caused individual sales checks to be discarded as a practical method of recording transactions long before there were any Federal taxes in this field. Consequently, other methods are commonly to be found to account for the retailer's tax liability.

When cash registers are used which record on a tape the amount of each transaction, the tax and the purchase price for the article can be separately registered. Some cash registers even are equipped to accumulate the total of tax collected and recorded in this manner. The imposition of these taxes during the war years presented a difficult accounting problem to retailers without such cash registers, as new equipment was not being made. In some stores the combined total of the purchase price of the taxable article and tax are recorded in the cash register as a single transaction. Then a tally record is made of the amount of tax collected on the transaction. When the number of taxable sales at a particular cash register greatly exceeds the number of nontaxable sales, the practice is to tally the nontaxable sales.

In other cases, only the amount of the purchase is recorded in the cash register. The amount of Federal tax is collected from the customer and deposited in a locked box outside but permanently attached to the cash register. It is the usual practice of retailers using this method also to tally the amount of the tax collected on each transaction. Access to the locked box of tax collections is restricted to the store proprietor, manager, or other responsible employee.

Complaints that all of these methods result in under-collection of the retailer's tax liability are met with several types of audits. One is a test of actual sales and tax collections carried out over a period extending from a few hours to several weeks. In this time an employee or a tax auditor is assigned to each area in the store in which taxable sales are made. His duty is to make his own record of sales and tax collections. The resulting totals are compared with those reported in a like period without supervision. Injustice and hardship may result if such comparisons are not made fairly and accurately.

A second method frequently used is a computation of the tax liability for a test period from purchases and beginning and ending inventories of taxable articles. In the event of such an audit, the retailer should be prepared to demonstrate the extent of the shrinkage of taxable articles in his store from markdowns, sales to employees at cost, pilferage and other forms of loss. He also should be sure that the articles included in the test are actually taxable. This cannot always be determined infallibly from invoice descriptions.

Retailers should make their own checks from time to time to see that employees are collecting the required Federal tax. The relatively stable sales characteristic of drugstores often permits the determination day to day of an effective rate for expected tax collections in relation to total sales. Material deviation from the expected collections should be the cause of an immediate and thorough investigation.

Lists of Taxable Articles Not Available

The determination by retailers of their liability for the Federal taxes is complicated by the fact that no authentic list of taxable articles is anywhere available. This is understandable. Neither the Internal Revenue Bureau nor anybody else could possibly know of all of the articles offered for sale that might or might not be subject to the Federal tax. Trade associations have per-

formed a useful service by bringing together consolidated lists of articles on which questions in the past have arisen about taxability. Such lists are being constantly revised and extended. The Internal Revenue Bureau will decide about the taxability of any article when a sample is submitted to it. Speedier and more authoritative results are obtained when the sample is submitted to the Bureau headquarters in Washington rather than to the offices of individual Collectors. The immense number of articles on which rulings are sought sometimes leads to conflicting rulings if advice is sought from individual Collectors rather than from the Bureau headquarters.

Internal Revenue Bureau Helpful

Bureau rulings on the taxability of particular articles are subject to change. The possibility of disapproval or modification of its rulings by the Treasury Department is always present. This has led, in some cases in which the Treasury Department itself has intervened, to legalistic and highly impractical judgments impossible of enforcement. The Internal Revenue Bureau, on the other hand, has proved to be firm but sympathetic and helpful in its administration of the law and regulations. Consequently, retroactive penalties are rare, in the absence of fraud and with evidence of a reasonable effort to comply with the law.

State and Local Excise Taxes

The state and local excise taxes with which retailers and wholesalers in the drug trade are directly concerned are principally on beverage liquor and on cigarettes. In some states cigars and smoking and chewing tobacco are also subject to tax. Other subjects of state excise taxes are bottled soft drinks, soda fountain syrups, playing cards, and cosmetics. For the most part, these are stamp taxes. The responsibility for affixing the required excise tax stamps rests with the wholesaler or "distributor," as he is sometimes designated in the tax law. Usually a discount of 5 to 10% is allowed by the taxing authorities in recognition of the extra work involved in putting the tax stamps on the individual packages. Individual licenses at a nominal fee for an annual or indefinite term are required ordinarily from retailers. The licenses serve principally to identify to the tax authorities the retailers of the articles on which there is an excise tax. In some instances, purchases of retailers of articles subject to state and local excise taxes are of such large amount that these retailers have been able to qualify as wholesalers or "distributors." In these cases the retailer affixes the stamps and receives the discount allowed for this labor.

When these state and local excises are not stamp taxes, the practice is to require monthly or quarterly returns by retailers of the tax due. Cash or acceptable bond may be specified for the accrued tax. Purchase records and other accounts of wholesale and retail distributors dealing in taxable articles are subject to inspection and audit by the state and local authorities. When the records of the taxpayer are kept at a place outside the state or local area, some of the tax authorities have arranged with other jurisdictions for cooperative audits and investigations by accountants hired for the purpose. Some of these audits and investigations are undertaken, reportedly, on a contingent fee basis by the accountants.

General Sales Taxes

The general sales taxes present a tax-accounting problem principally for retailers in the drug trade. Wholesalers are affected only with respect to that part of their sales which is for use and not for resale. This includes, however, not only the incidental sales which may be made to ultimate consumers; it also includes sales to retailers for use rather than for resale. Thus it applies to sales by wholesalers to retailers of fixtures and equipment. It also includes supplies for use by the retailer unless these articles are specifically exempted from the tax.

The small unit sale that is characteristic of the retail drugstore creates many difficult problems for these retailers in accounting acceptably to the tax authorities for their liability for the tax. In most states and localities, consumer collection of the retailer's liability for the tax is mandatory. In a few states, tax tokens issued by the state authorities are still in circulation for collec-

tion from consumers of fractional cent amounts of the tax. These tokens have been put out in such denominations as 1/10, 1/5 and 1/2 cent. In Ohio the sales tax law requires retailers to keep on hand a supply of prepaid tax receipts. These tax receipts must be presented to customers at the time of each sale.

The "Bracket" Schedule

In most states and in all local jurisdictions, a bracket schedule is now the most common method for consumer collection of fractional cent amounts of the tax. For example, in New York City the bracket schedule prescribed by the City Comptroller provides that no tax shall be collected by retailers from their customers on sales 1 cent to 16 cents. On sales 17 cents to 66 cents, the tax collection is 1 cent. For sales 67 cents to $1.16 it is 2 cents, and so on for larger unit sales amounts. Such a bracket schedule is intended to result for the retailer in a collection of the tax from his customers which is equal to 100% of his liability for the tax. Neither this nor any other bracket schedule will collect exactly 100% of the tax liability at all times for all retailers. A shift in the proportion of sales of various unit amounts can result in a decided change in the proportion of the tax liability collected from customers under the bracket schedule.

Consequently, the usual requirement in the law or regulations is for the retailer to pay the higher of the rate of tax on his taxable sales or his actual collections of the tax from customers. Thus in New York City a retailer is expected to pay a minimum of 2% of his taxable sales. If he collects from his customers an amount which is more than 2% of his taxable sales, the law and regulations specify he is to turn over the excess to the City. The New York City authorities and those in other states and municipalities have gone beyond this simple requirement in their demands for payment of the tax. They have prepared estimates which indicate to their satisfaction the amount of the over-collection which should be obtained from month to month in drugstores and in other types of retail establishments. Then if a retailer does not turn in an excess as large as the tax collectors think he should, the retailer has the dubious choice of remitting the amount demanded or demonstrating to their satisfaction from his records that he collected less.

The over-collection of the sales tax which may result when a bracket schedule is used for consumer collection of fractional cent amounts of the tax presents still another tax problem. For instance, in North Carolina a 1-cent tax is collected from customers on sales 10 cents to 35 cents under the 3% state sales tax. The State Revenue Commission has approved use in drugstores and other retail establishments of transfer slips valid for purchases up to 35 cents with a payment by the customer of 1 cent tax. In Ohio prepaid tax cards are bought from the state for resale to customers by retailers. An official card is sold for 3 cents that prepays the tax on purchases up to $1.

Exemptions of specified items from the general sales tax also complicate retailers' records. The variety of methods previously described that are in use for recording collections of Federal excise taxes is also employed for the state and local sales taxes. Some drugstores have been able to obtain approval for the payment of an effective rate for the general sales tax that is based on tests which show the proportion of taxable sales to those which are not taxable. In a few states and localities the law provides merely for the payment of the specified rate of tax on the taxable sales. The immensely complicated problems of accounting for and paying to the authorities the excess collections of the tax are thus avoided.

City Sales Taxes

Cities and other localities to an increasing degree have been employing the general retail sales tax as a source of revenue. In those instances in which the state already has a sales tax, unnecessary complications have been avoided by working out a combined bracket schedule for simultaneous collection from consumers of the state and local sales tax. For instance, in San Francisco a 1/2% municipal sales tax is in effect. There is also a 2 1/2% state sales tax in California. Arrangements worked out between the state and municipal authorities and the retail drug trade and other merchants provide for the collection from con-

(*Continued, p. 767*)

PHARMACEUTICAL SURVEY FINDINGS AND RECOMMENDATIONS RELEASED OFFICIALLY

Publication of the first section of the findings and recommendations of the Pharmaceutical Survey by the American Council on Education brings to a close the principal fact-finding period of this three-year program. The final eight months of the Survey as originally projected will be devoted to implementation of the findings.

In the fifty-page volume, obtainable from the Washington office of the Council, the origin, aims and plans of the Survey, together with eleven groups of the first findings and approximately sixty specific recommendations for action are set forth. In general, the volume, entitled "Findings and Recommendations of the Pharmaceutical Survey," follows the preview by the Director of the Survey, Dr. Edward C. Elliott, in his address at the San Francisco Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION. (See THIS JOURNAL, September, 1948, page 550).

Assisted by a staff of specialists, Dr. Elliott made a two and one-half year searching analysis of the facts of Pharmacy. The material collected and tabulated covers every phase of the practice of Pharmacy from the salaries of college professors through to the handling of prescriptions at the retail drugstore level. A large portion of these supporting data will be published later in separate volumes. Additional recommendations also may be made.

In preparing the findings and recommendations, Dr. Elliott was advised by a 17-man Advisory Committee which included a spokesman for the public as well as representatives of the broad field of education and leaders in various phases of the profession of Pharmacy. He also maintained close contact with various officials of leading professional, educational and other organizations in the field of pharmacy.

The Number One objective of the Survey recommendations is stated to be to provide the nation with an adequate supply of properly trained professional pharmacists to man the nation's 55,000 retail drugstores and the increasing number of hospital pharmacies. The Survey also took into account the increasing demand for professional pharmacists in the armed forces, various other branches of the government, and in the drug manufacturing and wholesaling fields.

However, the Survey findings also warn against producing an oversupply of pharmacists—a condition which might deprive some trained men and women of the opportunity for reaping adequate economic rewards and personal satisfactions from the practice of their profession. The Survey emphasizes that *quality* is more important than *quantity*.

SPECIFIC RECOMMENDATIONS

Specific recommendations include: Raising the standards of admission to the nation's 70 colleges of Pharmacy; more careful testing and screening of students during the early college training; and efforts on the part of state and local pharmaceutical organizations to encourage young high-school men and women of ability and personality to seek a career in Pharmacy.

Another recommendation proposed a general overhauling of the present four-year college Pharmacy course, with greater emphasis on the basic pharmaceutical sciences and increased instruction on the economic aspects of the practice of Pharmacy. In addition, the Survey urged adequately equipped and staffed Pharmacy colleges to establish six-year college programs leading to the degree of Doctor of Pharmacy.

Other Survey recommendations include: Creation of a Commission on Pharmaceutical Manpower to insure adequate records for the balancing of supply against demand for trained Pharmacists in times of peace as well as national emergency; more effective organization and operation of state boards of Pharmacy and the modernization of their examination systems for legal licensure; organization of a National Convention for Pharmaceutical Legislation to formulate uniform legal controls in the interest of public health; more financial support for colleges from commercial and industrial interests; the continued upbuilding of the teaching staffs of the colleges and schools; plans for the in-service training of practicing pharmacists; the appointment of a full-time Executive Officer for the American Council on Pharmaceutical Education, the agency which inspects and accredits colleges of Pharmacy. A system of classifying colleges into A, B and C institutions is proposed.

PRESCRIPTION SURVEY

One of the most difficult undertakings of the Survey was the detailed analysis of more than 13,000 prescriptions assembled from 220 Pharmacies, located in 186 cities, towns and villages of 39 states. The results, which furnish a comprehensive review of modern prescription practice, provide important data for the profession of medicine as well as Pharmacy. These results reflect the far-reaching changes which scientific research and the mass production of medicinals have brought about in providing improved medication which doctors can prescribe for their patients.

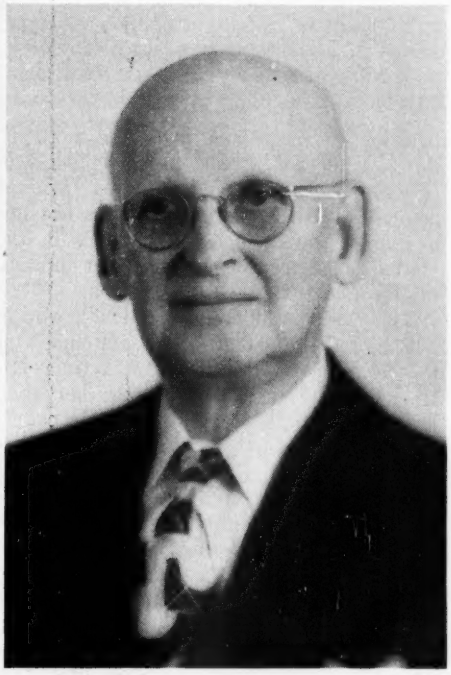
In the statement accompanying the release of the findings of the Survey Dr. Elliott stated: "During the Survey I have come to keen realization of the

critically important place in American life occupied by the Pharmacist, especially the Pharmacist of the well-known corner drugstore. A new profession of Pharmacy is coming to be. The character and standards of this new profession are of interest to the whole of our people.

"The records show that this year close to four hundred million prescriptions will be filled in the more than fifty thousand retail drugstores in the country. The American people need to realize that every time a prescription is taken to one of these establishments, not only health but ofttimes life, is at stake. The American health standards more and more demand competent professional Pharmacists.

"Pharmacy is very much alive. Its leaders are energetically proceeding to place Pharmacy on a higher professional level. The Pharmacist promises to be more important than ever before in providing health service for the American people"

JOHN CULLEY—A. PH. A. HONORARY PRESIDENT



JOHN CULLEY

John Culley of Ogden, Utah, was elected honorary president of the AMERICAN PHARMACEUTICAL ASSOCIATION for the current year at the San Francisco convention. This honor comes to him after a long, faithful and unusually fruitful service to his profession in many capacities.

Born in England, Mr. Culley came to the United States as a youth and became interested in the profession of pharmacy through his work in an Ogden, Utah, pharmacy during school vacation periods. After graduating from the Philadelphia College of Pharmacy in 1894, he eventually returned to Ogden where he conducted pharmacies for forty years. For ten years he operated a pharmacy restricted largely to prescription practice.

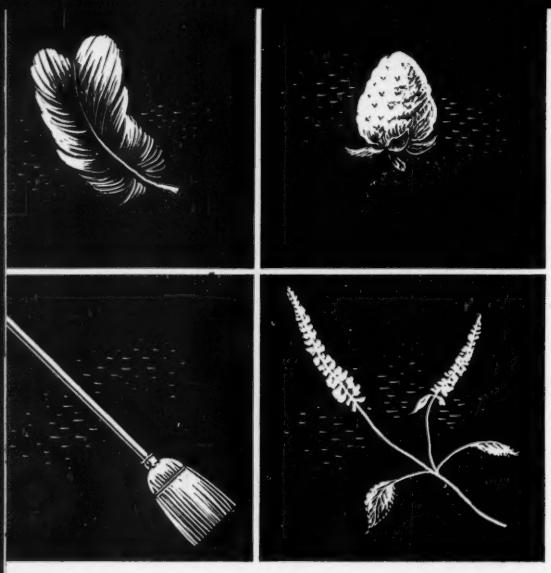
His pharmaceutical activities have been numerous and varied and his accomplishments many. For twenty years (1908–1928) he served as a member of the Utah State Board of Pharmacy and in 1919 was elected President of the National Association of Boards of Pharmacy. He was a leader in the reorganization of the N. A. B. P. at that time and helped to found both the present district plan of operation and the present type of reciprocal registration procedure. During his years of service to the National Association of Boards of Pharmacy he spoke in over twenty states, urging higher educational standards and improved regulatory legislation for pharmacy.

As an association worker, his achievements were also unusual. Not only did he serve as secretary, treasurer and president of his own state association in Utah, but he also helped to organize the Nevada Pharmaceutical Association and the Northern California Retail Druggists Association. He also helped to organize the Conference of Pharmaceutical Association Secretaries.

Mr. Culley is a life member of the AMERICAN PHARMACEUTICAL ASSOCIATION, having held membership since 1908. The Philadelphia College of Pharmacy conferred upon him the honorary degree of Master of Pharmacy. He also holds honorary life memberships in the Utah and Nevada Pharmaceutical Associations; honorary life membership in the Utah State Board of Pharmacy; and honorary licensure for life as a pharmacist in Utah.

In civic affairs, Mr. Culley has been known as a leader and effective organizer. He also served as director of the local Chamber of Commerce; president of the Kiwanis Club and state lieutenant-governor of Kiwanis; and has held high offices in the Elks lodge.

Mr. Culley has contributed much to the advancement of pharmacy and pharmaceutical legislation especially in the far west.



PROGRESS IN ANTIHISTAMINE THERAPY

WILLIAM T. STRAUSS, M.D.

Historical Sketch

THE PRESENCE of hypersensitiveness in humans has been recognized since before the time of Christ. Lucretius, living in the first century B.C., is credited with the rather significant phrase, "One man's meat is another man's poison."[1] Hippocrates in his sixty-fourth aphorism stated: "It is a bad thing to give milk to persons having headache."[2] Galen (A.D. 130–200) recognized that there was such a thing as allergy to goat's milk. In the second century we find the Babylonian Talmud giving detailed directions as to how to treat egg hypersensitiveness of the gastrointestinal tract by giving a preparation of egg white in appropriate doses.

In more recent times it became general medical knowledge that some persons developed attacks of sneezing or of asthma when they were in the presence of certain shrubs, trees or flowers. Thus Ledel in 1683 and Hunerwolf in the same year were led to proclaim roses as being particularly offensive. But despite this widespread recognition of the phenomenon of hypersensitiveness, physicians believed such cases were comparatively rare and therefore deserved special mention. Only in the past fifty years have clinicians come to realize how very common is the allergic patient. Undoubtedly this is due not only to better recognition and improved diagnostic methods, but to an actual increase in the incidence of allergic diseases in the so-called civilized countries. Although exact figures are not available, the incidence of allergy in the United States has been estimated at approximately 7 to 10% of the population.

The world is indebted to Richet, who in 1902 noted that some of his animals after having received injections of Actinia Extract became more sensitive rather than less so or completely immune. He coined the term "anaphylaxis," meaning the removal of protection. The following year Arthus discovered that certain nontoxic substances, such as normal serum, could also elicit similar manifestations of hypersensitiveness. In 1904, the now famed Theobald Smith made an important contribution to the study of allergic diseases by demonstrating that guinea pigs are especially easy to sensitize, thus providing a readily available laboratory animal for experimental use.

However, it was Von Pirquet who in 1903 developed the principles as applied to human beings that have since formed the cornerstone of modern allergy. It was he who advanced the concept that all symptoms which an organism acquires after intimate contact with an organic substance, living or nonliving, can be attributed to an altered condition. In 1906 he coined the term "allergy" from the Greek, meaning "altered capacity to react." It was Von Pirquet, also, who introduced in 1910 the cutaneous

Presented before the American Pharmaceutical Manufacturers Association, 1948 meeting.

tuberculin test and thus became the creator of modern skin testing in allergy.

It is hardly more than thirty-five years ago that Noon and Freeman introduced the therapy of hay fever by means of intracutaneous injections, thus laying the groundwork for the now widely used desensitization methods.

Histamine in Anaphylaxis and Allergy

In 1910, Barger and Dale reported their isolation of beta-imidazolylethylamine, better known as histamine, from Ergot.[3] Dale[4] thus was led to believe that the pharmacologic effects of histamine in animals resembled quite closely those noted in anaphylactic shock, and offered his opinion that histamine itself might be released in the latter phenomenon. This became the point of origin for a long chain of experimental evidence showing histamine to be the probable mediator of many, if not all, anaphylactic symptoms. This appeared all the more likely when Best and his associates[5] demonstrated that histamine is a normal constituent of many living tissues. On the basis of his work, Dale[6] propounded the theory that histamine is liberated from the tissues of animals by cell stimulation due to the interaction of antigen and antibody.

A few years later, a Japanese investigator, Watanabe,[7] demonstrated that the lungs of guinea pigs and the livers of dogs were considerably reduced in their histamine content following anaphylactic shock. Soon thereafter, a histamine-like substance was discovered[8] in the blood and lymph of the dog during anaphylactic shock. Then in 1936, Dragstedt and Mead[9] virtually clinched the argument that histamine is one of the major factors in the production of symptoms of anaphylactic shock by showing that the amounts of histamine found in the anaphylactic dog in the inferior vena cava blood above the diaphragm were very similar to those required to produce experimentally the same changes by intravenous injection.

Despite much intensive research, no one has yet uncovered any real evidence against the theory that histamine is one of the more important factors in producing symptoms of anaphylactic shock. However, one is justified in believing that *other* factors are also active, perhaps in the same cases and even simultaneously. For example, take the delayed coagulation of blood, which can be counted for by the release of a substantial quantity of heparin during the anaphylactic reaction.[10]

Unfortunately, the evidence that histamine is a major factor in producing allergic phenomena in man has not kept abreast with that for animals.[11] It must be borne in mind that while anaphylaxis in animals is a more or less generalized bodily reaction, allergic phenomena in humans are usually confined to a few specific tissues, such as the mucous membrane of the respiratory tract, the skin, or certain glandular structures. It has not been definitely determined, although it is quite likely, that there is an appreciable increase in the circulating histamine in human blood during all allergic reactions.

Lewis and Grant[12] were the first to note evidence for a release of histamine during allergic phenomena in man. They demonstrated that the wheals produced in patients with dermatographia contained a substance having many of the pharmacologic properties of histamine. Soon after a method to determine blood histamine in humans was published,[13] Capuani[14] among others demonstrated an increased histamine content in some asthmatic patients during an attack. It was also shown[15] that the blood of nonallergic individuals was remarkably stable with respect to its histamine content. In more recent years, there has gathered an appreciable literature indicating that there is no definite correlation between the histamine content of the blood and the appearance of symptoms,[11] a fact which may account for the conflicting results which have been reported with modern antihistamine therapy in asthmatic patients. Similar findings have been recorded[16] with hay fever patients.

A valuable lead pointing to the possibility of much additional study in this field came when Katz and Cohen[17] demonstrated that the histamine in white blood cells can be released from blood by adding the specific allergen *in vitro*. Concerning the skin, there is considerable evidence[18,19,20,21] that histamine is released during an allergic reaction in that organ.

Histamine in Therapy of Allergic Diseases

Since histamine had been demonstrated quite conclusively as being involved in allergic reactions, and since the practice of grad-

ual desensitization was becoming popular, it is not at all surprising to learn that many attempts were made to undertake histamine therapy in these conditions. Among the first investigators were Ramirez and St. George,[22] who treated 10 patients with "endogenous" asthma by subjecting them to gradually increasing doses of histamine. Good results were claimed in two. More recently, Farmer[23] stated that he had obtained good results in treating vasomotor rhinitis and asthma with small doses of histamine. Others have similarly reported good results in thus treating angioneurotic edema,[24] migraine-like headaches,[25] and certain types of pruritus and urticaria.[26]

As to this general mode of treating allergic diseases, *viz.*, by giving gradually increasing doses of histamine, it would be well to bear in mind the teachings of Feinberg,[10] who calls attention to the fact that there is but little real evidence that the variations in the range of sensitivity to histamine in different persons is wide, in nonallergic as well as in allergic individuals. If histamine has anything at all to do with allergic phenomena, it is because a quantity more than the tolerance dose is released by the tissues. As Feinberg[10] says: "From my experience and from that of others, it is felt that the effectiveness of histamine in allergic conditions has been exaggerated, and that whatever beneficial results are obtained must be explained on a basis other than desensitization to histamine."

Histamine-Azo-Protein

In view of the fact that histamine *per se* will not act as an antigen, that is, it will not produce antibodies, it occurred to Fell[27] to conjugate histamine with a protein substance in the hope that the ensuing combination would produce antibodies against the histamine portion of the molecule. The preparation was employed by Sheldon[28] in 39 cases. Of 17 patients with allergic skin disorders, 8 were said to have been improved; of 22 with other allergic diseases including asthma, 10 were improved.

Recently the American Academy of Allergists polled a number of qualified allergists to determine their opinion as to the clinical efficacy of histamine-azo-protein. The consensus was that those who had given the preparation a fair trial found it of comparatively little benefit. In contrast, Cohen and Friedman[29] reported that the drug was of value as an adjunct to well-managed cases of allergy. Generally speaking, it is believed that the true worth of histamine-azo-protein in the treatment of allergic condition is yet to be determined.

Histaminase

Histaminase is an enzyme found in some tissues, especially the kidney and intestinal mucosa, which is capable of destroying histamine.[30] This substance, when mixed with a quantity of histamine in the test tube, is capable of destroying the latter; and it was only natural for clinicians to believe it might work similarly in the human body.

The first animal reports by Karady and Browne[31] were indeed gratifying, showing that histaminase prevented the development of anaphylactic shock in guinea pigs. Later results,[32] however, were most disappointing.

These papers were followed by numerous clinical observations, most of them in the beginning being favorable. Thus, good results were claimed in instances of serum sickness,[33] hay fever,[34] skin disorders[35] and many other allergic conditions.[36] However, it was not long before these claims began to be discredited. Keeney[37] reported failure in hay fever; Peshkin[38] stated the drug was of no value in allergic conditions in pediatric practice; and finally in 1940, the Council on Pharmacy and Chemistry of the American Medical Association released a report[39] stating that histaminase did not show sufficient evidence of clinical worth to justify its inclusion in N. N. R.

Histamine Antagonists ("Antihistamines")

As we have seen, ever since it was demonstrated that histamine appears to play a major role in the allergic reaction, much effort was expended towards the development of a compound which would effectively displace or replace histamine at the cell receptor. It has been shown that the earlier preparations, at first hailed as epoch making, soon had to be classified among the failures.

But an infinitely more promising approach to the problem was initiated by a French school led by Fourneau who developed certain promising synthetic compounds with which to antagonize histamine. As long

ago as 1910, Fourneau and his followers prepared phenolic ethers of aminoalcohols, but soon put them on the shelf to gather dust because of their disturbing side effects on the heart. Then, in 1933, Fourneau and Bovet[40] reported the synthesis and properties of compound 929F, the structural formula of which will be described later. This proved to be the beginning of a now large series of so-called antihistamine drugs. It is to be pointed out, however, that this compound was not investigated for its antihistaminic qualities at this point.

Histamine antagonists or antihistamine drugs may be defined as "those drugs which are capable of diminishing or preventing several of the pharmacological effects of histamine and which do so by a mechanism other than the production of pharmacological responses diametrically opposed to those produced by histamine."[41]

There are several groups of antihistamines presently known, and for simplicity these will be classified according to a modification of the scheme of Loew.[41]

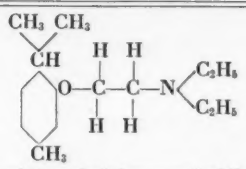
Fourneau Compounds (929F and 1571F)

Preparation 929F chemically is 2-isopropyl-5-methylphenoxy-ethyldiethylamine. Following extensive study of this compound, Anne-Marie Staub[42] published data about several series of similar compounds synthesized in Fourneau's laboratory. The most effective ones pharmacologically were 929F and 1571F, N-phenyl-N,N',N'-triethylethylenediamine (Fig. I). In 1941, Climenko and co-workers[43] published their pharmacolcgical findings with these compounds. Although 929F could protect guinea pigs against two lethal doses of histamine, the compound proved to be very toxic, causing a marked drop in blood pressure, respiratory symptoms, etc. Others[44,45] confirmed these findings, and it was soon conceded that the phenolic ethers and the ethylenediamine compounds were too toxic for general use. This also proved to be the case when 929F and 1571F were tried clinically, and their further use was discontinued.

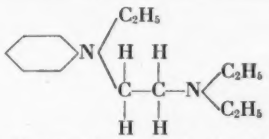
Mosnier Compounds

In 1942, Halpern[45] studied some 24 derivatives of 1571F and selected two which he believed gave the most promise as antihistamines. These preparations were synthesized by Mosnier in the laboratories of

FIGURE I



2-isopropyl-5-methylphenoxyethyldiethylamine (thymoxyethyldiethylamine or compound 929F)

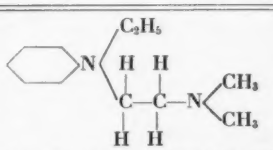


N-Phenyl-N-ethyl-N'-diethylethylenediamine or compound 1571F

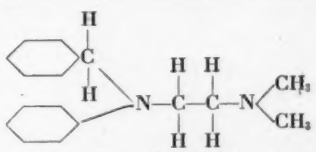
the Rhone-Poulenc Society of Chemical Manufacturing in France. They were the dimethyl homologue of 1571F, N-phenyl-N-ethyl-N',N'-dimethylethylenediamine, designated as 2325 R.P.; and N-phenyl-N-benzyl-N',N'-dimethylethylenediamine, designated as 2339 R.P. or Antergan (Fig. II). From the structural formulas it is obvious that Antergan differs from 2325 R.P. only in the substitution of a benzyl for an ethyl group.

Antergan was found to be the more desirable compound, so that study on it became quite concentrated. Halpern[45] found that it would effectively prevent shock and death in guinea pigs due to intravenously administered histamine—as a matter of fact, it was 150 times as efficient in this respect as the original Fourneau compound 1571F. In guinea pigs, the LD_{50} was of the order of

FIGURE II



N'-phenyl-N'-ethyl-N-dimethylethylenediamine (dimethylaminoethylaniline or compound 2325 R.P.)



N'-phenyl-N'-benzyl-N-dimethylethylenediamine, (dimethylaminoethylbenzylaniline, "Antergan" or compound 2339 R.P.)

300 mg. per Kg. of body weight when given orally. Toxic doses resulted in death preceded by intense motor excitation and convulsions.

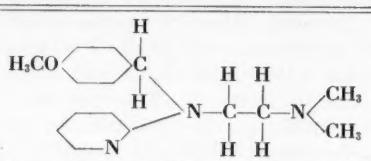
Clinically, Antergan began to be used in 1942, and a number of reports were published. One of the first was that by Gate[47] and her associates, who claimed good results in urticaria, eczema, asthma, hay fever, rhinitis and migraine. The average daily dose ranged from 0.3 to 1.0 Gm. It should be noted that the drug had to be given every two hours. Side effects were not infrequent, especially with the larger doses. They included nausea, vomiting, headaches, dizziness, and gastric discomfort, the latter being relieved by giving sodium bicarbonate. The substance appeared to be rapidly metabolized and eliminated, no traces being found in the urine after forty-eight hours.

The following year, Sciclounoff and Junet[48] reported similar clinical results, their hay fever patients responding particularly well. Aubertin[49] claimed Antergan to be very effective in treating serum sickness, angioneurotic edema and some cases of asthma. He, too, observed frequent side effects such as dizziness, heartburn, nausea and occasionally vomiting. It is noteworthy that some of his patients exhibited a slight hypnotic effect.

Others, including Parrot[50] and Decourt,[51] reported similar findings.

A few years after Antergan was released, Bovet[52] reported the development of a chemically similar compound, N-*p*-methoxybenzyl - N - dimethylaminoethyl - α - aminopyridine, more commonly known as Neoantergan (Fig. III). It is obvious that there is little difference structurally between Antergan and Neoantergan. It was demonstrated,[53] however, that Neoantergan protected animals much more efficiently against histamine shock. Clinically, too, Neoantergan proved itself somewhat superior.[51]

FIGURE III



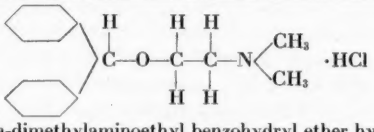
N-*p*-methoxybenzyl-N-dimethylaminoethyl α-aminopyridine
(Neoantergan or compound 2786 R.P.)

Newer Antihistamines

Because of the interest aroused by the Mosnier and Rhone-Poulenc compounds, American chemists and pharmacologists set to work to develop more effective and less toxic antihistamines. A number of them have been announced within the past few years, some of which are already on the commercial market. In general, all save one (Thephorin) have the ethylenediamine structure basically, with changes in the side chains.

One of the first of these compounds, beta-dimethylaminoethyl benzohydryl ether hydrochloride (Benadryl) (Fig. IV), has been reported to be more effective than the European preparations in preventing death in histamine-treated guinea pigs.[54] In humans, this drug given orally had little definite effect on the whealing produced by scratch tests with serial dilutions of histamine or with ragweed extract in hypersensitive individuals. However, when given locally, the drug was quite effective as a wheal inhibitor.[55]

FIGURE IV

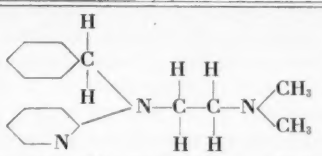


Beta-dimethylaminoethyl benzohydryl ether hydrochloride (Benadryl Hydrochloride)

Since these early experiments, Benadryl has been used in a great variety of allergic manifestations with variable therapeutic results. The side reactions noted with the use of this drug are noted in about 50% of the patients.[10] Most common is drowsiness, lassitude and dizziness, probably due to a depressant effect on central nervous system centers. The drowsiness at times is sufficient to necessitate limitation of the patient's ordinary activities.

Another compound having a similar structural formula is N′-pyridyl-N′-benzyl-N-dimethylethylenediamine, commonly known as Pyribenzamine (Fig. V). It is noted that it differs structurally from Antergan only in the substitution of a pyridyl for the phenyl ring, and from Neoantergan by the lack of the methoxy group. Mayer[56] found this drug a particularly promising one—some

FIGURE V



Pyribenzamine (N′-pyridyl-N′-benzyl-N-dimethyl-ethylenediamine)

6 to 12 times more effective than preparation 2325 R.P. and 1.5 to 3 times better than Antergan in protecting guinea pigs against histamine death.

Clinically, the results with Pyribenzamine have been very interesting. It has been found to be of value in numerous allergic disorders including hay fever, vasomotor rhinitis, urticaria and some cases of bronchial asthma. As to side reactions, the reported incidence varies according to the observer. Generally speaking, they are fairly common (25–35% of cases), but are usually not serious or severe. Drowsiness is prominent among them, other manifestations being dizziness, insomnia, dryness of the oral and pharyngeal mucous membranes, urinary symptoms and palpitation.

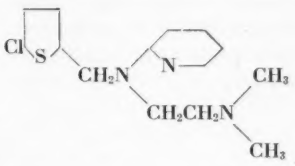
Recently Litchfield and his associates[57,58] have published on several new ethylenediamine compounds, tentatively named Chlorothen and Bromothen (Fig. VI). Thus far, the reported results indicate these preparations to be twice as active and one-half as toxic acutely as Pyribenzamine with which they were compared. For this purpose, the usual guinea-pig histamine experiments were employed. For toxicity tests, mice and rabbits were used.

Data on two related compounds designated as Thenyl D.P.E. and Bromobenzyl D.P.E. were likewise obtained (Fig. VI). The thenyl compound was less than one-third as active as Pyribenzamine against histamine aerosol, and its active toxicity in mice similar to that of the compared drug. The bromobenzyl preparation was found to have an activity and duration of protection like that of Pyribenzamine, but its acute toxicity was only one-half.

In summary, it was found that "The replacement of the benzyl by a thenyl group decreased activity without changing toxicity."[57] If the benzyl radical was replaced by 5-bromo-2-thenyl or 5-chloro-2-thenyl, the activity was increased and the toxicity decreased.

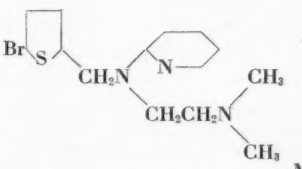
Not many months ago, another ethylenediamine derivative, N-(2-Pyridyl)-N-(2-Thenyl) - N′,N′ - Dimethylethylenediamine hydrochloride, was investigated in several laboratories and has since formed the basis of several publications.[59,60,61] It has since been marketed by two manufacturers, under the names Thenylene and Histadyl, respectively (Fig.VII). As can be seen, it differs from Pyribenzamine in that a thiophene ring replaces benzene. This com-

FIGURE VI



M. P. 106–108° C.

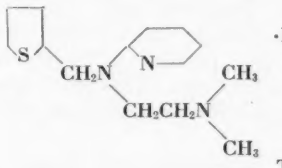
N,N - dimethyl - N′ - (2 - pyridyl) - N′ - (5 - chloro-2-thenyl)-ethylenediamine hydrochloride (Chlorothen)



M. P. 123–124° C.

N,N-dimethyl-N′-(2 - pyridyl) - N′ - (5 - bromo - 2-thenyl)-ethylenediamine hydrochloride (Bromothen)

N,N-dimethyl-N′-(2-pyridyl)-N′-(2-thenyl)-ethylenediamine hydrochloride

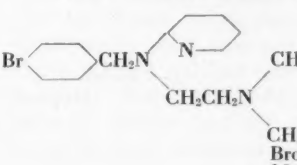


Thenyl D.P.E.
M. P. 162–165° C.

The synthesis of this compound has been reported independently by Weston (11).

The second one is:

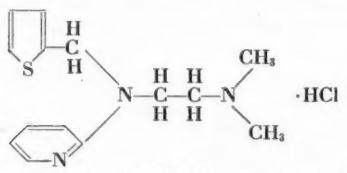
N,N-dimethyl-N′-(*p*-bromobenzyl)-N′-(2-pyridyl)-ethylenediamine hydrochloride



Bromobenzyl D.P.E.
M. P. 184–186° C.

pound, henceforth to be designated "thiophene derivative" for simplicity in this report, is a colorless, crystalline material having a bitter taste, and is soluble in water. It has been reported to abolish spasm produced in isolated guinea-pig intestine strips by 0.005 μg./cc. of histamine in a concentration of 0.002 μg./cc. Using live guinea pigs in an atmosphere containing histamine in a concentration of 0.187 μg. per liter of air, the thiophene derivative was able to protect the animals from dyspnea and convulsions in doses of 0.152 ± 0.023 mg./Kg. With the same method, Benadryl protected the animals, but only in much larger doses (about eight times as great a concentration), while Pyribenzamine protected in about one-half the concentration.

FIGURE VII



Graphic formula of N,N-dimethyl-N′-(2-thenyl)-N′-(2-pyridyl)-ethylenediamine

In anesthetized cats, this compound reduced the response of blood pressure to histamine, but if given alone the drug in larger doses resulted in a sharp drop in the animal's blood pressure. However, the thiophene derivative when given to cats together with epinephrine, actually potentiated the pressor action of the latter drug. This effect was previously reported for Benedryl and Pyribenzamine.

With respect to toxicity, the thiophene derivative was given intravenously to mice, and the median lethal dose found to be 19.85 ± 0.69 mg./Kg. In contrast, the median lethal intravenous dose of Benadryl in mice was reported to be 29.70 ± 1.67 mg./Kg., and for Pyribenzamine, 18.26 ± 0.60 mg./Kg. The investigators[59] concluded that Benadryl was the least toxic of the three. Concerning chronic toxicity, a group of mice was each given 20 mg./Kg of the thiophene derivative daily for four weeks. The animals upon being sacrificed showed no evidences of pathologic lesions.

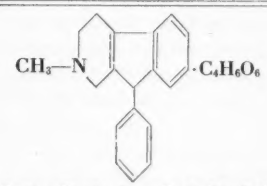
Clinically, this compound has been tried in a fairly large number of patients.[60, 61] Of 21 instances of ragweed hay fever, the thiophene derivative afforded complete or moderate relief of symptoms in 18 (86%). Another series of 112 patients with seasonal hay fever experienced good results in 70% of the cases. In 5 cases of bronchial asthma, the drug was of moderate value in one, the remaining 4 being classified as failures. Of 17 patients with drug and serum reactions due to thiouracil, penicillin, streptomycin and other substances, 12 reported complete and 4 moderate relief. Twenty-two patients with various skin conditions are said to have obtained relief in 9 instances, 7 others reporting moderate amelioration of symptoms. Other investigators have claimed the following percentage benefited in the several disorders: 46% of 95 cases of "pre-asthmatic cough;" 58% of 12 cases of urticaria; and 69% of 13 cases of atopic dermatitis.

With respect to the human dose of the thiophene derivative, the clinicians who have studied its use recommend 50 to 100 mg. by mouth from one to four times daily. The most commonly encountered side effects were drowsiness, dizziness, lightheadedness, gastrointestinal irritation and tinnitus. Drowsiness was most pronounced, one group recommending *d*-desoxyephedrine as an antidote to counteract it. Since these antihistamines may well be taken for weeks and months at a time, Peirce and Mothersill[61] subjected 5 patients to three months' daily treatment with the drug, each patient receiving an average of 170 mg. per day. No demonstrable changes were found in the peripheral blood picture, blood chemistry, electrocardiographic tracings or renal function tests.

Last year, still another antihistamine was announced by the Roche Research Laboratories, this one being characterized chemically by a structure totally different from those of the other substances previously reported. Wenner and Plati[62] synthesized several pyridindene derivatives, of which 2-methyl-9-phenyl-2, 3, 4, 9-tetrahydro-1-pyridindene proved to be the most satisfactory. This preparation has since been released in the form of its hydrogen tartrate salt, being known as Thephorin, the generic name of which is phenindamine (Fig. VIII). It can be seen readily that structurally,

Thephorin stands out from the other compounds previously described. It belongs to a class of chemical compounds hitherto unknown.[63]

FIGURE VIII



Thephorin, Roche brand of phenindamine
2-methyl-9-phenyl-2,3,4,9-tetrahydro-1-pyridindene hydrogen tartrate

Thephorin is a white crystalline powder having a melting point of 165–167° C. At room temperature, it is soluble up to 3% in water, and in a 2% aqueous solution has a *p*H of approximately 5.

Although Theophorin *per se* is the hydrogen tartrate salt of the base, the following data *re* the pharmacology of the drug is expressed in terms of the hydrochloride salt for the sake of uniformity and because the other antihistamines which were employed for comparative purposes were available only as the hydrochlorides.

Guinea pigs were subjected to an aerosol of histamine in the concentration of 0.4 mg. histamine base per liter of air. It was found that the administration of 2 mg./Kg. of Thephorin, given prior to such exposure of six minutes' duration, protected the majority of animals. In contrast, it required twice as much Benadryl to obtain a similar result.[64] In another series of experiments, the animals were exposed to the histamine spray 30 minutes after the intraperitoneal injection of various antihistamines. It was found that in order to protect the animals from convulsions, the following doses of the various compounds were required: Thephorin 0.42 mg./Kg., Benadryl 0.8 mg./Kg., and Pyribenzamine 0.25 mg./Kg.

Thephorin was also found of value in protecting guinea pigs from death due to histamine injected directly into the heart, a standardized volume of 1.0 cc./Kg. histamine phosphate solution being used in each case. Five mg./Kg. of Thephorin protected the animals against 15 median lethal doses of histamine, whereas a similar dose of Benadryl protected against only 7 M.L.D. of histamine. The corresponding figure for Pyribenzamine was 30. It is particularly interesting to note the long duration of effect of Thephorin, marked antihistamine action being evident for five hours after Thephorin administration.

Guinea pigs sensitized by the injection of 2 cc. of a 10% egg-white solution received 0.5 cc. of a 2% solution as a shocking dose eighteen days later. Thephorin seemed to be somewhat more protective than Benadryl, but the difference was not as pronounced as that in connection with injected histamine.

Isolated strips of rabbit and guinea-pig intestine were exposed to certain agents which induced spasm—acetylcholine, barium ions and histamine. The relative potencies of the compounds tested to relieve such spasm are shown in Table I. Unity is assigned to Thephorin for comparative purposes. Thus, Thephorin and Benadryl are equally potent against spasm induced by acetylcholine, whereas Pyribenzamine is considerably weaker. Little difference is noted in antibarium action, and the relative potencies against histamine agree with those obtained from various intact animal experiments. It is important to note that, in determining the antihistamine potency on the guinea-pig gut, the time interval between the addition of the spasm-relaxing and spasm-inducing agents is important if they are given in this order. As the time interval increases, Thephorin's effect becomes more pronounced, the reverse being the case with Benadryl. Benadryl can be washed out of the bath with relative ease, while numerous and frequent bath changes are needed to remove Thephorin. The drug also has a marked antagonistic action

TABLE I—RELATIVE ANTISPASMODIC POTENCY ON ISOLATED INTESTINAL STRIPS

	Unity is given arbitrarily to Thephorin against		
	Histamine Phosphate (Guinea Pigs) 2×10^{-7} Gm./cc.; Tyrode, 30° C.	Acetyl-choline Br (Rabbit) 10^{-7} Gm./cc.; Locke, 37° C.	$BaCl_2$ (Rabbit) 2×10^{-4} Gm./cc.; Locke, 37°
Nu-1504 (Thephorin)	1	1	1
Benadryl	1/2	1	1
Pyribenzamine	3	1/5	1/2
Atropine	...	90	...
Papaverine	...	...	1

against histamine-induced vasodepression.

Thephorin also exerts a fairly potent local anesthetic action. On the rabbit cornea, a 1% solution produces deep anesthesia for twenty-nine minutes. If the intracutaneous wheal test in guinea pigs[65] is used, Thephorin can be demonstrated to have a longer lasting local anesthetic effect than procaine (Table II).

TABLE II—LOCAL ANESTHETIC ACTION OF THEPHORIN AND ANALOGS

	Duration in Minutes*			
	0.1%	0.05%	0.025%	0.0125%
Procaine	45	30	20	15
Thephorin	70	65	25	20

* Figures represent average values from 3 guinea pigs for each compound and each concentration.

The acute toxicity of Thephorin has been determined in mice, rats, guinea pigs, rabbits and dogs (Table III). It is found that Thephorin has approximately the same toxicity as Benadryl.[13]

Chronic toxicity studies with the oral administration of Thephorin have been conducted on rats and dogs for periods up to eight months. Daily doses as high as 50 mg./Kg. in rats and 30 mg./Kg. in dogs were used. Blood studies were normal throughout and microscopic examination of tissue revealed no pathological changes.

From a clinical point of view, Thephorin has been given under controlled conditions to more than 1500 patients manifesting various allergic symptoms, in addition to more than 100 "normal" persons. In the latter instances, the purpose was to determine acute toxicity and the frequency of untoward effects. In these trials, daily doses of Thephorin up to 600 mg. (75–100 mg. being the average effective dose in relieving allergic disorders) were given. In general, there were no appreciable changes in the blood picture, blood pressure, pulse rate or electrocardiographic tracings.

With regard to side effects, most observers have reported comparatively few when Thephorin is given in 75–100 mg. daily doses—an incidence of about 20–25%. In contrast, Benadryl and Pyribenzamine have been reported to give an appreciably higher incidence of untoward reactions. One of the most interesting characteristics of Theporin is the extremely low incidence of drowsiness occurring as a side effect in marked contrast to practically all other marketed antihistamines. As a matter of fact, Thephorin has been reported to have a mild stimulating effect and may produce insomnia in some patients if taken at bedtime.

The range of conditions which has been treated with Thephorin is wide and includes hay fever, vasomotor rhinitis, bronchial asthma, urticaria, various skin disorders, etc. Reynolds and Horton[66] of the Mayo Clinic reported their results in a series of various allergic disorders. Seventy-seven per cent of their hay fever cases obtained "excellent results"; 64% of the patients with vasomotor rhinitis experienced similar "excellent results." As to side effects, the Mayo Clinicians have this to say: "No

TABLE III—ACUTE TOXICITY

LD_{50}, mg./Kg. ± S.E.

Route of Administration	Thephorin Nu-1504	Benadryl	Pyribenzamine
Intraperitoneal	*(30) 88 ± 11	(20) 86 ± 14	(26) 83 ± 14
Intravenous	(20) 22.5 ± 2.5	(24) 23.0 ± 1.5	(10) 9
Oral	(30) 255 ± 21	(30) 250 ± 16	(11) 210
Subcutaneous	(20) 270 + 60		
	In Rats		
Oral	(14) 280 ± 50		
	In Guinea Pigs		
Intraperitoneal	(20) 140 ± 42	140 ± 42	
	In Rabbits		
Intravenous	(14) 15 + 2.4	17 ± 2	
Oral	(8) 500		
	In Dogs		
Intravenous	(14) 33		

* Figures in parentheses represent numbers of animals used.

serious toxic symptoms have resulted in our patients from the use of this drug. Two patients have been using it daily for ten months. General examinations and complete blood studies, urinalysis and electrocardiographic studies on these two patients at frequent intervals have disclosed no evidence of any toxic changes." The results of most of the other numerous clinicians who have studied Thephorin roughly parallel those reported by the Mayo group.

Conclusion

We can thus rightly state that a new epoch in the treatment of allergic disorders has been ushered in with the advent of the so-called antihistamine drugs. It is to be emphasized that the use of these compounds may be productive of symptomatic relief but does not apparently affect the underlying condition. Most observers agree that the antihistamines probably act by competing with the histamine which is freed during the allergic reaction in their alliance with the receptor organ. It is probable that no antihistamine, presently known or to be developed in the future, will ever fully control the symptoms incident to all allergic reactions. This stand is taken because we are not at all certain that the release of histamine is the sole manifestation of the hypersensitive reaction—other chemical agents might well be formed at the time of the reaction which have not been recognized, yet may contribute to the development of undesirable effects. However, it will undoubtedly be agreed that a major step forward in the relentless battle against disease has been made.

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(*Continued, p. 751*)

A.Ph.A. SECTION AND AFFILIATED GROUP MEETINGS AT SAN FRANCISCO

WOMEN'S AUXILIARY

Mrs. Charles H. Evans, president of the Women's Auxiliary, reported for the Auxiliary at the final General Session as follows:

"In making our annual report of the activities of the Women's Auxiliary to the parent organization, I am happy to be able to report another year of progress in the Auxiliary

"Aside from the established scholarship objective and social features incident to the meetings, we have carried on a program begun last year to enlist the support of state association members' wives in establishing active state auxiliaries to cooperate with our national Auxiliary. We are happy to report a total of around 35 active auxiliaries, four having been formed during the past year.

"Our goal for the coming year is an active auxiliary in each state, thus forming closer ties and rendering whatever work we can do for the advancement of pharmacy.

"The elected officers for the coming two years are President, Mrs. Charles H. Evans; Second Vice-President, Mrs. Earl R. Serles; Treasurer, Mrs. Roy L. Sanford."

Mrs. Charles H. Evans, President of the Women's Auxiliary, reports for the Auxiliary at the final General Session.

AMERICAN COLLEGE OF APOTHECARIES

The American College of Apothecaries held three sessions in connection with the annual convention of the AMERICAN PHARMACEUTICAL ASSOCIATION with which the College is affiliated.

The sessions were well attended and were featured by spirited discussions on problems relating to prescription practice including the economic factors involved. The following papers were presented:

"Prefabricated Pharmaceuticals," L. D. Bracken.

"Facts and Figures," Charles E. Wilson.

"The Building and Results of News Information to Physicians," Arthur H. Einbeck.

"Hospital Pharmacy," Frank J. Steele.

"Prescription Pricing," Herbert Gerding.

"Present Day Employee and Employer Relationship," J. L. Bracken.

The second session was featured by the presentation of the Lascoff award for 1947 which was given to Charles V. Selby, the secretary-treasurer of the organization.

The following officers were elected: President, Charles E. Wilson, Mississippi; Vice-President, A. R. Granito, New Jersey; Secretary-Treasurer, Charles V. Selby, West Virginia; and President-elect, R. V. Robertson, Washington.

JOINT MEETING OF SECTIONS

An interesting discussion at the joint meeting of the Sections on Education and Legislation, Practical Pharmacy and Pharmaceutical Economics at the San Francisco convention of the AMERICAN PHARMACEUTICAL ASSOCIATION brought out some specific incidents which illustrate the danger of self-service in connection with the sale of drugs and medicines.

L. M. Walsh, secretary of the California Board of Pharmacy, cited the following instances occuring in "self-service" drugstores:"

1. A mother, intending to purchase infant's glycerin suppositories, was given pile suppositories by a non-pharmacist clerk. This could have resulted in actual harm to the child.
2. A non-pharmacist clerk recommended anesthetic lozenges for an infant's inflamed throat. Walsh pointed out that a qualified pharmacist would have recognized that an inflamed throat may be a warning of the onset of any one of many childhood diseases. The parent should have been told to take the child to a physician, he said, but instead was given lozenges that would relieve pain and mask the warning signs of disease.
3. As a stomach ulcer medication, a non-pharmacist clerk gave a customer sodium bicarbonate, the use of which would be harmful to ulcer patients.
4. A customer, asking for a "dark liquid for a sore eye," who should have been referred to a physician, was given tincture of iodine, which would cause destruction of tissues in the eye.
5. Silver nitrate pencils were sold in place of caustic pencils; tissue irritation would be a possible result.

At the same joint meeting, Mr. Walsh cited the following objectives to be attained in protecting the public through adequate legislation with respect to the dispensing of drugs:

1. That all pharmaceuticals and medicines are made by trained personnel.
2. That all such products are made under sanitary conditions.
3. That they all meet the Federal and State laws.
4. That the labels have no false statements.
5. That the pharmacists and manufacturing pharmacists use the very best of U. S. P. and N. F. quality drugs.
6. That the public is protected from fake cures.
7. That Boards of Pharmacy and other governing boards have the power and ability to enact rules and regulations from time to time that are necessary for the further protection of public health.
8. That only pharmacists are allowed to fill prescriptions.

SECTION ON PRACTICAL PHARMACY

The Section on Practical Pharmacy held three meetings under the chairmanship of Charles V. Selby who opened the first session with an informal statement dealing with the development of professional pharmacy in the retail field.

Following the reading of the report of the secretary by Dr. Elmer M. Plein, attention was called to the action of the Section at the Milwaukee meeting, requesting the Council of the A. PH. A. to appoint a special committee to study the proposal of Glenn Sonnedecker for the preparation of a glossary of terms as a recommended guide for terminology in publications dealing with pharmacy. Chairman Selby appointed a committee consisting of Glenn Sonnedecker, chairman, James S. Hill and Elmer M. Plein to give further study to the development of this proposal.

Chairman Selby named a nominating committee consisting of Mrs. Evlyn Gray Scott, chairman, Earl Gunther and Samuel Goldstein. This committee later brought in a report, suggesting the following nominees: Chairman, John Zugich; First Vice-Chairman, Arthur P. Wyss; Second Vice-Chairman, Raymond E. Schmitz; Secretary, Elmer M. Plein; Delegate to the House of Delegates, Charles V. Selby. The report of the nominating committee was adopted and the nominees were elected to the offices indicated.

The first and third sessions of the Section were devoted to the reading of sixteen papers, many of which will appear in future issues of THIS JOURNAL and many of which evoked considerable discussion.

An interesting feature of the concluding session of the meetings of this Section was a general discussion participated in by many of those present on such topics as prescription pricing, professional fees, advertising, professional services, and general prescription department activities.

SECTION ON PHARMACEUTICAL ECONOMICS

This Section held three sessions under the chairmanship of Dr. Stephen Wilson with

E. J. Ireland as secretary. At the first session on Wednesday, August 11, Dr. Paul C. Olsen spoke on "Collection Methods in Use in Drug Stores for the Federal Retail Excise Taxes and State and Municipal Sales Taxes." This paper elicited considerable lively discussion on the general subject of excise taxes and resulted in the passage of a resolution approving reduction or repeal of the excise tax on cosmetics and toilet articles.

Dean Roland T. Lakey presented a paper entitled "Dollars and Inventories." This paper led to a discussion on the question of duplication of proprietary products by various drug manufacturers and on the general subject of patents and trade-marks in connection with medicinal preparations.

A paper on "Wholesalers and Retailers Can See Eye to Eye" prepared by Irving L. Lyons, Jr., was read by Secretary Ireland, and a paper entitled "Units or Dozens" prepared by Elwood Gary was read by Chairman Wilson.

Chairman Wilson appointed a committee on nominations which included Bert Mull, chairman, Arthur Einbeck and John F. McCloskey. This committee later brought in the following nominations: Chairman, W. L. Califf; Vice-Chairman, J. L. Hawk; Secretary, Edward J. Ireland; Delegate to the House of Delegates, Stephen Wilson.

These nominees were unanimously elected by the Section to the offices indicated.

The balance of the time of the meeting of this Section was taken up with a discussion of a revised set of by-laws which was approved by those in attendance and have been submitted to the Council of the AMERICAN PHARAMACEUTICAL ASSOCIATION.

SECTION ON EDUCATION AND LEGISLATION

This Section held three meetings, one of which was a joint session with the Section on Practical Pharmacy and the Section on Pharmaceutical Economics. In the absence of Secretary Ralph Clark, Bernard Bialk acted as secretary. The meetings were presided over by James S. Hill, chairman.

A nominating committee, consisting of E. L. Cataline, chairman, Arthur Glasser and Joseph L. Hill, was named, which later presented the following nominees for the various offices: Chairman, B. A. Bialk; Vice-Chairman, Ron Robertson; Secretary, Ralph Clark; Delegate to the House of Delegates, James S. Hill. These nominees were elected as the officers of the Section for the ensuing year at the final session of the Section.

Numerous papers were read and discussed by members of the Section. In the general discussion it was brought out that training in pharmaceutical manufacturing and pharmaceutical engineering requires cooperation between colleges of engineering and colleges of pharmacy. The most successful combination in this field of instruction develops pharmaceutical engineers, and it seems quite clear that manufacturers do not seek chemical engineers with pharmaceutical training as an afterthought.

SECTION ON HISTORICAL PHARMACY AND AMERICAN INSTITUTE OF THE HISTORY OF PHARMACY

The Section on Historical Pharmacy met jointly with the American Institute of the History of Pharmacy on Wednesday, Thursday and Friday afternoons, August 11, 12 and 13. Vice-Chairman Kenneth Redman presided over the first session of the joint meeting in the absence of the chairman of the Section on Historical Pharmacy, Clarence M. Brown. Dean Roland T. Lakey officiated as secretary.

A nominating committee consisting of E. J. Ireland, chairman, E. L. Hammond and C. O. Lee was appointed which later reported the following nominations for the various offices: Chairman, Kenneth Redman; Vice-Chairman, Roland T. Lakey; Secretary, H. George Wolfe; Delegate to the House of Delegates, Clarence M. Brown.

The first session was devoted to a series of six papers on the history of the AMERICAN PHARMACEUTICAL ASSOCIATION from 1852 to 1948, and it was decided that these papers be properly edited and preserved for future publication, possibly in connection with the centennial meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1952.

The second joint session was presided over by President Arthur H. Uhl of the American Institute of the History of Pharmacy, and the third session was presided over by Vice-Chairman Redman.

The Section gave consideration to a set of by-laws presented by Dr. George Urdang, chairman of the By-Laws Committee, and these by-laws were passed.

FROM THE SECRETARY'S OCTOBER DIARY

1st This day addressing the pharmacy student convocation at Temple University on "Pharmacy's Acres of Diamonds" in connection with dedication ceremonies for the new pharmacy facilities provided in the university's dental-pharmacy building. Later with President Little to the Bellevue-Stratford Hotel for a meeting of the joint committee of the A. PH. A. and American Social Hygiene Association—the first meeting held without the late Dean DuMez who originated the joint efforts of these groups in bringing educational material on V. D. to pharmacists. And now to Red Bank for the week end.

4th After the customary Monday chores at the office, a pleasant evening at the Statler Hotel with Temple University alumni, attending the first annual dinner of the all-Pennsylvania college group and meeting many a prominent Pennsylvanian now active in the nation's capital.

5th A pleasant chat with Dr. and Mrs. H. A. B. Dunning who called at the headquarters building while on a visit to Washington. Much of the afternoon spent in reviewing National Formulary and other printing contracts with Harold Hutchison of the Mack Printing Co.

6th A busy day with staff conferences and completing manuscript for a new guidance booklet on pharmacy for prospective students and others interested.

8th Early on the train to Atlantic City where the Federal Wholesale Druggists Association was in session; meeting George Frates en route and spending much of the early afternoon with Swain, Barta, Frates and Newcomb reviewing the National Drug Trade Conference effort to produce a uniform state pharmacy law. Back to Washington for a late evening review of the mail.

9th Glad to see the final A. PH. A. ballots for the election of officers on their way in the mail. At dinner with Pat Costello at the Statler discussing the affairs of the American Council on Pharmaceutical Education and later joined by Swain and others who had gathered for the special meeting tomorrow.

11th This day and yesterday spent in an important meeting of the American Council on Pharmaceutical Education, acting as temporary secretary while the Council reorganized because of Dr. DuMez's death. Much major business transacted in these two days and realizing more and more how much of a load DuMez carried in this activity on a voluntary basis. The decision to transfer the Council office to Chicago where Costello will act as secretary and the N. A. B. P. will make facilities available, assures continuity of the Council's activities on a high plane.

12th Glad to greet the fine group of Cincinnati pharmacists who stopped to visit with us on their way to the N. A. R. D. convention. Also a visit from Dr. Troy Daniels to discuss educational problems and wind up the affairs of the San Francisco convention which ended happily for all concerned. Orchids to Troy and his associates for a job well done.

14th Working steadily these days with the staff, especially on hospital pharmacy and publication problems; also discussing with officials of the Army Medical Library, plans for coordinating A. PH. A. library facilities with those of the Army Medical Department to provide better service for all concerned.

15th Now off on the early train to Atlantic City for the N. A. R. D. convention, meeting many friends there and greeting President John Tripeny, who officiated in splendid form; John Dargavel, who keeps things moving on an even keel; Executive Committee Chairman Frank Moudry and other members of the executive committee as well as speakers, the New Jersey hosts, and later enjoying the many exhibits and liberal samples made available for the traveling bag. At night to the convention hall for Bristol-Myers show entitled "Break the Bank" which had been diverted to N. A. R. D. entertainment.

16th Early to breakfast with President Thelma Morris Coburn of the Conference of Pharmaceutical Association Secretaries, to discuss program details for the Conference which will meet with us at Jacksonville in April. And now to the convention hall to listen to three excellent talks by George Frates, who summarized the Washington scene; Ernest Little who brought greetings and a splendid message on pharmacy's professional services, and Bob Swain who dealt with economic problems. Now a pleasant visit with Pat Costello and Newell Stewart while viewing 1950 convention facilities at various Atlantic City hotels and then homeward bound,

traveling with Costello, Bander and others as far as Philadelphia where they embarked for Chicago and this traveler proceeded to New Jersey.

23rd A busy week completed with heavy concentration on Washington problems, interspersed with a trip to Baltimore on Wednesday to meet at the University of Maryland with the committee of Maryland pharmacists who are planning the posthumous Remington Medal Award ceremony honoring the late Andrew G. DuMez. On Thursday acting as discussion leader at the half-day Streptomycin Conference called by the Department of Commerce. Friday spent largely with the A. PH. A. Committee on Public Relations which met here to plan for 1949 National Pharmacy Week. Final event of the week was the meeting of the Policy Committee of the Hospital Pharmacy Division to which came Francke, Zugich, Godley and Purdum of the A. S. H. P.; Worth Howard of the American Hospital Association and Sister Adelaide of the Catholic Hospital Association. All were pleased to greet President Ernest Little who attended the meeting in his official capacity and also substituted for Dean Serles, A. PH. A. committee member, who was unable to be present. A fine constructive meeting with much accomplished.

24th All this day with the Policy Committee working on hospital pharmacy standards and ways and means of implementing the activities of the Hospital Pharmacy Division. There was complete meeting of minds on current and future problems which augurs well for the future of A. S. H. P. and A. PH. A. joint efforts.

25th Today a visit to the Census Bureau with Dr. Elliott and Harold Darnell and Eleanor Poland of the headquarters staff to discuss with Director Capt and members of his staff, the possibility of more complete coverage of pharmacy statistics in the 1950 enumeration. It is unfortunate that more people are not able to sit down with the so-called bureaucrats and obtain first-hand information on their problems. This group has been thoroughly enlightened on census problems and what it takes to include additional questions for the enumerators and what the possibilities are of obtaining representative answers to the questions which are included. The sum total of the findings, as far as Dr. Elliott and this writer are concerned, points clearly to the fact that pharmacy must make arrangements to obtain its own statistics.

27th These past days working with Harold Darnell on the JOURNAL. Glad to welcome Eugene Bertrand of Owen-Illinois to discuss some phases of the film now being prepared on certain phases of the pharmacist's services. Discussions on matters pharmaceutical with this industrialist are always stimulating. And now departing for a quick trip to Jacksonville in Florida, to meet with the 1949 convention committee.

30th Back at the office after two days of most pleasant association with the hosts of our 1949 convention. On arrival at Jacksonville Thursday morning, greeted by Dick Richards, the genial, efficient and hard working secretary of the Florida Board and State Association, a veritable dynamo of energy. Now a visit from Mr. and Mrs. Kenneth Atwood and other members of the convention committee and then a tour of local hotels which resulted in virtual selection of the George Washington as headquarters. In the evening to the dinner of the Northeast Florida Pharmaceutical Association which will be the sponsoring Society for this convention. To the dinner came a large representation of Florida pharmacists to hear about the A. PH. A. and its work. Among the visitors were Director Foote and members of the faculty and student body of the University of Florida School of Pharmacy, members of the Board of Pharmacy, and many Florida pharmacists from near and far, all intent upon providing visitors to Florida next April with a program long to be remembered. On Friday by automobile with Pharmacists Pierce, Griffin and Ware to the Naval Air Station where special entertainment is planned for the ladies; to St. Augustine and the Marine Studios, all of which will be greatly enjoyed by those who will attend the convention as was the case with this writer. A final session at the home of Kenneth Atwood reviewing preliminary details for the convention and then back to Washington with a send-off at the station from Director Frank Winchell, who conducts the Jacksonville Tourist and Convention Bureau with high efficiency and who can be depended upon to have Jacksonville's attractions ready in fullest measure.

SOCIAL HYGIENE DAY
FEBRUARY 2, 1949

The Joint Committee of the AMERICAN PHARMACEUTICAL ASSOCIATION and the American Social Hygiene Association met in Philadelphia on October 1, 1948, to consider plans for Social Hygiene Day, which will be observed on February 2, 1949.

At this meeting the following minute was adopted, as it was the first meeting held after the death of Dr. A. G. DuMez, who was a member of the Committee since its inception and who, as President of the AMERICAN PHARMACEUTICAL ASSOCIATION, was instrumental in the organization of the Committee:

> Dr. A. G. DuMez, a founder and long a member of this Committee having passed away, this Committee makes record of the deep sense of obligation and gratitude felt by this Committee and by the two Associations here represented for the devotion, skill and wisdom which Dr. DuMez brought to his lifelong service to science, education and public welfare.

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No. 6 in a Series

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THOUGH cancer is a disease primarily of the older age groups, and not a major childhood disease, it ranks ahead of tuberculosis, diphtheria and whooping cough as a cause of death among children.

Routine inoculations, improved sanitation and better nutrition now protect our youngsters against most of the infectious diseases. But the fact that nearly 3000 children under 15 died in 1946 of cancer and allied diseases—almost three times as many as died of poliomyelitis—indicates that cancer has emerged as an important child health problem.

For this reason the pharmacist, as a source of reliable health information in the community, should be alert to the signs and symptoms of childhood cancer.

Contrary to the widespread belief that cancer in children is invariably fatal, approximately half the children who develop the disease could be cured through early diagnosis and proper therapy. Because these are so often lacking, cancer and allied diseases (other tumors, leukemia and Hodgkin's disease) are responsible for 4 per cent of all deaths among children from age 1 to 15.

The most common types of neoplastic disease among children are comparatively rare among adults. On the other hand, the usual adult sites of cancer—stomach, breast and genital organs—are seldom affected in children. Up to age 14, cancer appears most commonly in the bones, the kidneys, the eye and orbit, the lymphatic and blood-forming organs, the soft body tissues such as muscle and fat, and the nervous system.

These neoplasms present specialized problems, but if they were discovered in the early stages the cure rate could be greatly increased. Application of a few simple principles of child health care can help save many lives:

1. All children should be examined regularly by the family doctor, by a pediatric specialist or in a child-health clinic. Doctors can often detect abnormalities that parents may not notice.

2. Parents should be advised to follow recommendations for correction of physical defects found in school health examinations. Some easily treated conditions, such as certain types of pigmented moles and benign growths, may become malignant if neglected.

3. Parents should carefully watch the child's development, especially noting constant or periodic changes that differ significantly from those of other children in his age group. An unusual rate of growth or asymmetrical growth of a body part, as well as persistent aches and pains, should be investigated by a physician. Children normally heal easily from minor bumps or bruises, but a chronic, non-healing swelling or lump, with or without pain, may indicate serious trouble.

The pharmacist can find many opportunities to impress these health rules upon parents who come to him for advice. He can help assure good medical care for children, and thus make a notable contribution to public health.

A. Ph. A. Branches

STUDENT BRANCHES

SECRETARY Barbara Grubb of the **Oregon State College Branch** reports that fall activities are well under way. The season was opened with a picnic for pharmacy students and their families and the first business meeting was devoted to planning for the Oregon State Pharmacy Homecoming which took place in November. Charles Summy is president of the Branch.

Two organization meetings were held during October by the **University of Mississippi Branch** at which plans were made for a fall dance and a spring banquet.

Officers for the 1948–49 term were elected by the **University of Buffalo Branch** at their October meeting. They are: Howard Schaffer, president; Marcelyn Burke, vice-president; Marilyn Swabb, secretary; and Reynold Swanson, treasurer. Guest speaker at the session was Mr. Hubert George, promotion manager for McKesson and Robbins, who spoke on "Your Future in Pharmacy."

St. John's University Branch elected the following officers for the ensuing year, according to Secretary Heydorn: Henry Eisen, president; Emil Grillo, vice-president; Curtis Heydorn, secretary; and Dominick Sabia, treasurer. Following election, Professor H. C. Raubenheimer, head of the Pharmacy Department of the University, welcomed new members, pointing out the need for and benefits of a professional organization in pharmacy.

The **Albany College of Pharmacy** students have recently made application to the parent Association to form a student branch. With a charter membership of 150, this branch should get off to a good start under the able leadership of Dean Francis J. O'Brien, who will serve as adviser to the branch, and interested members of the faculty.

Presentation of the first John J. Grasser pharmacy scholarship was made to Fred Sutherland, pharmacy freshman, at a joint meeting of the **Loyola University Branch** and the Loyola pharmacy alumni. The one-year scholarship, which was established in 1947 at a testimonial banquet for Dr. Grasser, dean emeritus of the New Orleans College of Pharmacy, was awarded to Mr. Sutherland following a competitive examination in which he placed first. In the above photo, Dr. Grasser (left), is shown congratulating student Sutherland while Dr. J. O. Weilbaecher, member of the alumni board of examiners, looks on.

The student branch of the A.PH.A. of the **University of Washington** College of Pharmacy sponsored a Welcome Week to acquaint Freshman and transfer students with the College. The activities of the week included a general meeting held the day before school opened in September, at which representatives of the various organizations and Freshman instructors were introduced, followed by a tour of the College and Drug Garden.

LOCAL BRANCHES

THE **Philadelphia Branch** will hold seven meetings during the current season, according to President John E. Kramer. Included among these will be a pharmacist-physician night and a past-presidents' night. Other sessions will feature authoritative speakers on various subjects. At the first meeting members heard Dr. Sidney Weinhouse, biochemical research director, Research Institute, Temple University, discuss "Use of Isotopes in Pharmaceutical Research." The business portion of the meeting was turned over to Dr. Madeline O. Holland, delegate to the House of Delegates, who reported on the San Francisco meeting of the A. PH. A.

Plans for 1948–49 meetings of the **Northern New Jersey Branch** have been completed and a pocket-size card outlining the sessions has been issued to members of the Branch. The October meeting was

devoted to a testimonial dinner for Dr. Ernest Little, president of the parent Association. The next three sessions feature speakers from state and Federal agencies, and during March there will be four seminar lectures. A representative of a pharmaceutical manufacturing firm will speak at the final meeting of the Branch.

A joint session was held by the **Southeast Wisconsin Branch** in conjunction with the Milwaukee County Pharmacists Association in September. Carl E. Schmidt of the National Advertising Department of the *Milwaukee Journal*, gave an illustrated lecture on "Consumer Analysis" and John H. Muth entertained with vocal selections. Officers elected by the Branch for current year are: Emil C. Horn, president; Walter Koepke, vice-president; Frank Kuskowski, treasurer; and Merle Betts, secretary.

The September meeting of the **Northern California Branch** was turned over to consideration of a plan for a legislative program under the general subject "Politics and Pharmacy." John Foley, president of the Northern California Retail Druggists Association, and Fred Butler, president of the San Francisco Pharmacists Union, discussed issues which their respective organizations expect to encounter. The balance of the meeting was conducted as an open forum so that members of the Branch could establish a program for their legislative committee to follow.

A discussion of "Newest Developments in Anesthesia" by Dr. Charles Wycoff, chief anesthetist, St. Joseph's Hospital, San Francisco, was featured at the October meeting of the Northern California Branch.

Secretary Eddie Wolfe of the **City of Washington Branch** reports that members heard Carl C. Dauer, Epidemiologist of the District of Columbia Health Department, speak on "Present Day Measures for the Control of Communicable Diseases" at their October meeting.

The October meeting of the **New York Branch** was highlighted by a panel on artificial insemination. Topics discussed were "Donor Selection in Artificial Insemination," "Treatment of Male Sterility" and "Artificial Insemination."

"Sharing Our Experience with Our Employees" was the subject of an address by E. N. Beesley, director of personnel relations division, Eli Lilly & Co., at the October meeting of the **Northwestern Ohio Branch.** Mr. Beesley's address was followed by a film entitled "By Jupiter" produced by Marshall Field & Co.

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PRODUCTS RECENTLY ACCEPTED BY THE A. M. A. COUNCIL ON PHARMACY AND CHEMISTRY

Council descriptions of new drug products only are published regularly in THIS JOURNAL *as they are accepted. Rules upon which the council bases its action appeared in the July (7:320) 1946 issue, and may be secured in pamphlet form upon request to the Secretary, Council on Pharmacy and Chemistry. American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.*

BENZYL BENZOATE, U. S. P.—$C_{14}H_{12}O_2$—A clear, colorless oily liquid with slight aromatic odor employed externally in various emulsions containing 25 to 30%.

For standards see U. S. Pharmacopœia under Benzyl Benzoate and Benzyl Benzoate Lotion.

Actions and Uses.—Benzyl benzoate applied externally in the form of a 25 to 30% emulsion or lotion has been found to be an effective scabicide. Although reported to be somewhat effective also as a pediculicide, its use for pediculosis uncomplicated by scabies is not recommended. Application is occasionally followed by a slight, transitory burning sensation. Rarely, severe skin irritation may occur in patients with particularly sensitive skins. It should never be allowed to come in contact with the eyes.

Dosage.—A 25 to 30% lotion or emulsion of benzyl benzoate is applied with a swab or brush over the entire body surface (*except the face*) while the skin is still damp immediately following scrubbing of the lesions in a 10-minute soap-warm water bath. Care should be taken to insure application to and around the nails. The first application is allowed to dry and a second application made to the most involved areas. Children ordinarily require 60 cc. to 90 cc. and adults 120 cc. to 180 cc. for a single treatment. Adequate sterilization of bed and body clothing is essential. Twenty-four hours later, clean clothing is put on after a warm soaking bath. A second or third treatment following the same routine should be carried out if necessary to eradicate the parasite. Secondary pyogenic infections do not contraindicate treatment, but should receive appropriate measures.

George A. Breon and Company, Kansas City, Mo.

Lotion Benylate: 120-cc., 480-cc. and 3,840-cc. bottles. An oil-in-water emulsion containing 25% of benzyl benzoate and approximately 2% of triethanolamine stearate. The product is required to be labeled as Modified Benzyl Benzoate Lotion because it differs from the official benzyl benzoate lotion, U. S. P. essentially by the emulsifying agent used in its preparation.

CARBOL - FUCHSIN PAINT. — Carfusin-Rorer.—A solution containing boric acid 1%, phenol 4.5%, resorcinol 10%, fuchsin 0.3%, acetone 5% in water, *q. s.*

The boric acid, phenol, resorcinol, fuchsin and acetone used in the preparation of this particular preparation meet the requirements of the U. S. Pharmacopœia or The National Formulary.

Actions and Uses.—Carbol-fuchsin paint is a stabilized preparation of the original basic fuchsin formula known as Castellani's paint that is widely employed for topical application to superficial fungus infections of the skin. Its use should be restricted to subacute or chronic dermatophytoses; it has been found to be of value for epidermophytosis interdigitalis pedum ("athlete's foot"), other intertriginous lesions of fungus origin, tinea trichophytina (ringworm) and tinea imbricata.

Carbol-fuchsin paint has the advantage over the original and subsequently modified preparations in that it is stable, but it should be protected against evaporation. It shares with other triphenylmethane dyes the disadvantage that it will stain clothing with which it comes in contect. It should never be applied to large areas of the body or to patients with particularly sensitive skins. A test application of a 1:3 dilution should be made to a single small lesion before beginning treatment with the full strength paint. It should be properly guarded against accidental ingestion because of the poisonous character of the ingredients.

Dosage.—Carbol-fuchsin paint is applied full strength directly to the surface of the skin lesions. Thorough topical application once or twice daily is indicated in subacute phases; three times daily in chronic or particularly stubborn lesions. Interim use of a foot powder and twice daily change of hosiery are recommended in the treatment of epidermophytosis pedis. In cases associated with excessive drying of the skin, application of the paint may be continued in conjunction with applications of either boric acid ointment containing 2 to 5% of ammoniated mercury or an ointment of petrolatum containing 1% each of sulfur and salicylic acid and 25% each of zinc oxide and talc.

William H. Rorer, Inc., Philadelphia

Carfusin: 30-cc. and 120-cc. bottles. A solution of boric acid 1%, phenol 4.5%, resorcinol 10%, fuchsin 0.3%, acetone 5% in water, *q. s.*

U. S. trademark applied for.

DIHYDROXY ALUMINUM AMINOACETATE.—Alglyn-Brayten.—A basic aluminum salt of glycine containing small amounts of aluminum hydroxide and glycine.—$C_2H_6O_4NAl$.

Actions and Uses.—Dihydroxy aluminum aminoacetate acts as a gastric antacid when taken orally and is thus useful for the control of hyperacidity in the management of peptic ulcer. It shares the properties of the aluminum hydroxide gel preparations, over which it has no important advantages. Its buffer action is not significantly more prompt, great or prolonged than that of the liquid preparations of aluminum hydroxide gel when compared on the basis of equivalent aluminum content. Compared with dried aluminum hydroxide gel (U. S. P.) it possesses only slightly more prompt buffering action and shares with that preparation the convenience of tablet form in which it is used. Because it contains from 50 to 60% less aluminum than the aluminum hydroxide preparations, the formation of astringent aluminum chloride in the intestine is theoretically reduced, which is claimed to result in less constipating action. The clinical significance of its slightly more prompt buffering action than dried aluminum hydroxide gel or its tendency to produce less constipation than aluminum hydroxide preparations in general is open to question. Claims that dihydroxy aluminum aminoacetate is generally superior to aluminum hydroxide preparations are disallowed until more

clinical evidence is available to demonstrate significant differences. The claimed prompt disintegration in the stomach of dihydroxy aluminum aminoacetate tablets when swallowed whole appears to offer only limited advantage for the ambulant treatment of persons unable to chew tablet preparations of dried aluminum hydroxide gel, since the latter may be readily broken up prior to administration when that becomes necessary.

Dosage.—Dihydroxy aluminum aminoacetate is administered orally in tablet form. One to two 0.5-Gm. tablets after meals and at bedtime or as otherwise required to control hyperacidity are recommended. As with other internally administered aluminum compounds, constipation may occur from prolonged administration.

Tests and Standards

Dihydroxy aluminum aminoacetate is a white, odorless powder with a faint sweet taste. It is insoluble in water and organic solvents, but soluble in dilute mineral acids and solutions of fixed alkalies to yield a cloudy solution which clarifies on heating.

Braylen Pharmaceutical Co., Chattanooga, Tenn.

Alglyn (Powder): bulk.
Tablets Alglyn: 0.5 Gm.

U. S. trademark 420,509.

HUMAN SERUM IMMUNE GLOBULIN.—The gamma globulin fraction of normal adult human plasma. The finished product contains 16.5% of gamma globulin and complies with the minimum requirements of the National Institute of Health and as prepared by an acceptable method.

Actions and Uses.—For modification or complete protection against measles.

Dosage.—The volume of the dose per pound of body weight is 0.02–0.025 cc. for modification and at least 0.1 cc. for prevention when the product contains 150 mg. of gamma globulin per cc.

Cutter Laboratories, Berkeley, Calif.

Immune Serum Globulin (Human): 2-cc. vials. Preserved with sodium ethyl mercuri thiosalicylate 1:10,000.

Licensed by Research Corporation. U. S. patent 2,390,074.

METHADON HYDROCHLORIDE.—Adanon-Winthrop-Stearns.—6-Dimethylamino-4,4-diphenylheptanone-3-hydrochloride.—$C_{21}H_{27}NO \cdot HCl$.

Actions and Uses.—Methadon hydrochloride possesses, in general, a pharmacologic action similar to that of morphine. It is claimed that methadon causes less nausea and emesis, except when given orally, and less respiratory depression than morphine, with minimal analgesic doses. As a preanesthetic agent methadon is inferior to morphine, since it is not a sedative.

Methadon hydrochloride has definite addiction liability. After its prolonged administration withdrawal symptoms have appeared; however, their onset is more gradual, they reach their peak more slowly, and their maximum intensity is less than after similar administration of morphine. Methadon can be substituted for morphine to prevent or alleviate morphine withdrawal symptoms.

Methadon hydrochloride may be used as an analgesic agent for the relief of moderate to severe pain. It is not recommended for conditions in which the sedative effects of morphine and related drugs are of importance. The drug has a satisfactory pertussive action.

Dosage.—Adults, 2.5 to 10 mg. depending on the intensity and nature of the pain. The usual dose is 7.5 mg. orally every three to four hours. For nonproductive cough, 1.25 to 2.5 mg. orally every three hours will usually be satisfactory.

Intramuscular injection is undesirable, but subcutaneous administration in doses of 2.5 to 10 mg. will usually be effective.

Tests and Standards

Methadon hydrochloride occurs as colorless crystals or as a white crystalline powder, odorless and possessing a bitter taste. It is soluble in water, freely soluble in alcohol and in chloroform, practically insoluble in ether and insoluble in glycerin. It is much more soluble in diluted sulfuric acid than in diluted nitric acid, but it is insoluble in diluted hydrochloric acid. It is incompatible with alkaline solutions and with syrup of wild cherry, U. S. P. It is precipitated from solution by the common alkaloidal reagents. The *p*H of a 1% aqueous solution of methadon hydrochloride is between 4.5 and 6.5.

Abbott Laboratories, North Chicago, Ill.

Solution Methadon Hydrochloride: 10 mg. per cc. 1-cc. ampuls. Each cubic centimeter contains 10 mg. of methadon hydrochloride in isotonic solution with sodium chloride.

Solution Methadon Hydrochloride: 10 mg. per cc. 20-cc. vials. Each cubic centimeter contains 10 mg. of methadon hydrochloride in isotonic solution with sodium chloride. Preserved with 0.9% benzyl alcohol.

Tablets Methadon Hydrochloride: 2.5 mg., 5 mg. and 7.5 mg.

Winthrop-Stearns, Inc., New York

Elixir Adanon Hydrochloride: 5 mg. per 5 cc., 473-cc. bottles.

Solution Adanon Hydrochloride: 5 mg. per cc., 2-cc. ampuls and 10 mg. per cc., 20-cc. vials.

Syrup Adanon Hydrochloride: 0.33 mg. per cc., 473-cc. bottles.

Tablets Adanon Hydrochloride: 2.5 mg., 7.5 mg. and 10 mg.

U. S. trademark, 435,101.

Methionine.—"Meonine"-Wyeth.—***dl*-Methionine.—γ-Methylthiol-α-aminobutyric acid.—$C_5H_{11}NO_2S$.

Actions and Uses.—Methionine is a sulfur containing amino acid which is considered to be an indispensable dietary component. It is available in synthetically prepared racemic form that may be administered in sufficient quantity to provide amounts equivalent to the biologically active levo form.

In animal experiments, certain deficient diets, especially those low in protein and high in fat, will cause liver damage in almost all animals, and, in addition, renal damage in some. That these pathological changes can be prevented by the addition to the diet of methionine alone is of great theoretical interest; similar protection can be obtained by casein, and doubtless by other common foodstuffs, as less rigorously restricted diets do not produce hepatic lesions.

Severe liver damage is regularly caused in protein-depleted dogs by chloroform anesthesia and this is altogether prevented by methionine. Lean beef and other high protein diets are equally effective. A similar protective effect has been demonstrated against other hepatotoxic agents such as oxophenarsine in animal experiments.

The striking results of these animal experiments have led to the use of methionine in the treatment of liver disease in man

especially in hepatic cirrhosis, acute hepatitis and toxic hepatitis due to carbon tetrachloride and T.N.T. poisoning. In all these studies, methionine was used as a supplement to other standard methods of treatment such as high protein diet and vitamins. The improvement which sometimes follows cannot be attributed to the methionine alone.

There is at present no valid evidence that pure methionine is superior as a therapeutic agent to a high protein diet containing foodstuffs, such as casein and eggwhite, which contain methionine in large amounts. But because of its great theoretical interest and in the hope that some special utility may be found, methionine has been accepted for experimental purposes only.

Of low toxicity, the use of methionine is not likely to be attended by any untoward effects.

Dosage.—As a supplement to a high protein diet, 3 to 6 Gm. daily is usually administered in tablet form. In severe cases 10 to 20 Gm. has been used. When oral administration is not feasible, crystalline methionine may be given in amounts of 5 to 10 Gm. daily by slow intravenous drip as a 3 per cent solution in Dextrose Injection, U.S.P., or Water for Injection, U.S.P., that has been further sterilized by autoclaving.

Tests and Standards

DL-Methionine occurs as white, crystalline platelets or a powder, having a faint odor. It is soluble in water, dilute acids and dilute alkalies; very slightly soluble in alcohol; and practically insoluble in ether. A 1% aqueous solution of DL-methionine exhibits a *p*H in the range 5.6–6.1, and is optically inactive.

Wyeth Incorporated, Philadelphia

Crystalline Meonine (Powder): 50-Gm. bottles.

Tablets Meonine: 0.5 Gm.

U. S. trademark 406,590.

METHYLTESTOSTERONE, U. S. P.—17-Methyltestosterone. — 17-Methyl-Δ^4-androstene-17-(α)-ol-3-one.—$C_{20}H_{30}O_2$.

For description and standards see the U. S. Pharmacopœia under Methyltestosterone and Methyltestosterone Tablets.

Actions and Uses.—Methyltestosterone may be given orally in the treatment of gonadal failure in the male. Its actions and uses are qualitatively the same as those for testosterone proprionate.

Dosage.—The dosage and duration of methyltestosterone therapy vary considerably, depending on the condition, its severity, previous androgenic administration and individual variation. It is usually preferable to begin therapy with a low dose, about 5 mg. daily, increasing to 10 mg. or 15 mg. if higher doses appear indicated.

Rare Chemicals, Inc., Harrison, N. J.

Tablets Methyltestosterone: 10 mg. and 20 mg.

POISON IVY-SUMAC EXTRACT.—A solution of the combined resin extracted from the fresh leaves of Rhus toxicodendron rodicon and Rhus toxicodendron vernix.

Actions and Uses.—Poison Ivy-Sumac Extract is used for prevention of the symptoms of the dermatitis produced through contact with Rhus toxicodendron rodicon and Rhus toxicodendron vernix.

Dosage.—Three injections of 0.1 cc., 0.2 cc. and 0.4 cc. on successive days.

Barry Laboratories, Inc., Allergy Products Division, Detroit

Poison Ivy-Sumac Extract: Packages of four vials each containing 0.7 cc. of concentrated extract and three vials each containing 0.9 cc. diluent; also in 15-cc. vials of concentrated extract. The diluent contains 0.5% procaine hydrochloride, and is preserved with 0.4% chlorobutanol in physiologic solution of sodium chloride.

Preparation.—The oily substance which is extracted with suitable solvents from the fresh leaves of Rhus toxicodendron rodicon and Rhus toxicodendron vernix is purified and decolorized. The resultant oily resin is dissolved in alcohol and standardized to represent a 1:500 dilution.

PROMETHESTROL DIPROPIONATE.—Meprane Dipropionate-Reed & Carnrick.—Dimethylhexestrol dipropionate.—3,4-Bis-(*m*-methyl-*p*-propionoxyphenyl)hexane. $C_{28}H_{34}O_4$.

Actions and Uses.—Promethestrol Dipropionate is similar in its actions to diethylstilbestrol and other synthetic estrogens. It is used for the same conditions for which estrogenic substances are employed and the contraindications are those of the natural estrogens.

Dosage.—In the menopause, treatment may be started with 1-mg. given three times daily, gradually reducing the dosage to 1 mg. daily. For suppression of lactation, 3 to 5 mg. daily.

Tests and Standards.—Promethestrol dipropionate occurs as a white, odorless crystalline powder, melting between 113 and 116° C. It is freely soluble in benzene, ether and ethyl acetate; slightly soluble in alcohol; and practically insoluble in water, dilute acids and dilute alkalies. A solution of promethestrol dipropionate in 90% alcohol is neutral to litmus.

Reed & Carnrick, Jersey City, N. J.

Tablets Meprane Dipropionate: 1 mg.

U. S. patent applied for.

PROPYLTHIOURACIL.—6-Propyl-2-thiouracil.—$C_7H_{10}N_2OS$.

Actions and Uses.—Propylthiouracil interferes with the formation of thyroxin by the thyroid gland. It is useful in the treatment of hyperthyroidism, thyrotoxicosis and thyroiditis. It is of no value and should not be used in other derangements of thyroid activity or in conditions not associated with hyperthyroidism.

Since propylthiouracil does not inactivate or interfere with the action of thyroxin already formed and stored in the gland, the effects of propylthiouracil medication do not appear until this store of thyroxin has been utilized. It may take several days to several weeks for the signs of decreased thyroid activity to become manifest, particularly if the patient has received previous iodine therapy.

Not all patients experience a permanent remission following propylthiouracil therapy, and the duration of treatment necessary to secure permanent relief from hyperthyroidism has not been determined. On the basis of the available information, it can be recommended only that propylthiouracil be used for preoperative treatment or for those patients for whom operation is contraindicated. The wisdom of depending on propylthiouracil as a substitute for operative procedure can be determined only by following the results of investigations carried on for longer periods.

Propylthiouracil is capable of producing adverse reactions in some patients. The incidence and severity of these reac-

tions are unpredictable, but they occur with less frequency than do those following medication with the parent compound, thiouracil. The severest complication of propylthiouracil therapy is granulocytopenia. Less severe reactions may include leukopenia, drug fever and dermatitis. The drug should be discontinued and appropriate therapy commenced immediately on the detection of signs of any of these complications.

Since the mild and the juvenile types of hyperthyroidism can frequently be controlled adequately by iodine therapy alone, propylthiouracil should not be used for these patients unless the safer form of therapy proves ineffective.

Dosage.—For severe cases of hyperthyroidism, initial doses of 50 mg. of propylthiouracil every eight hours appear to be effective in routine treatment, and 50 mg. twice daily in milder cases. Iodine should be administered for two or three weeks immediately before thyroidectomy.

The effective dosage of propylthiouracil should be continued until all signs and symptoms of the disease have been brought under control. Adequate maintenance dosage may best be established by determinations of the basal metabolic rate. *Patients should be instructed to cease medication and report to their physician immediately if any adverse symptoms such as sore throat, fever, coryza or malaise are experienced.*

Tests and Standards.—Propylthiouracil occurs as a bitter, white, powdery, crystalline substance of starchlike appearance to the eye and to the touch. It melts sharply in the range of 218 to 220° C. It is sparingly soluble in alcohol, slightly soluble in chloroform and ether, very slightly soluble in water and practically insoluble in benzene.

Abbott Laboratories, North Chicago, Ill.

Propylthiouracil Tablets: 25 mg. and 50 mg.

Lederle Laboratories Division American Cyanamide Co., Pearl River, N. Y.

Tablets Propylthiouracil: 50 mg.

The Upjohn Company, Kalamazoo, Mich.

Tablets Propylthiouracil: 50 mg.

RABIES VACCINE (ULTRAVIOLET IRRADIATION KILLED).—Brains of rabbits paralyzed by infection with fixed rabies virus are harvested, emulsified and brought to a 10% by weight suspension of tissue in isotonic solution of sodium chloride and filtered through sterile bolting silk. Following filtration, the tissue suspension in a continuously flowing thin film is exposed to the germicidal rays of ultraviolet lamp. Preserved with sodium ethyl mercuri thiosalicylate 1:10,000.

Actions and Uses.—Rabies Vaccine (Ultraviolet Irradiation Killed) is employed for the prophylaxis of rabies.

Dosage.—1 cc. subcutaneously, daily for 14 to 21 days. For severe exposure-bites on face or adjacent to central nervous system, 21 doses, two daily for the first three to seven days and then one dose daily.

Pitman-Moore Company, Indianapolis

Rabies Vaccine (Ultraviolet Irradiation Killed): 1-cc. vials packaged in units of seven vials. Preserved with sodium ethyl mercuri thiosalicylate 1:10,000.

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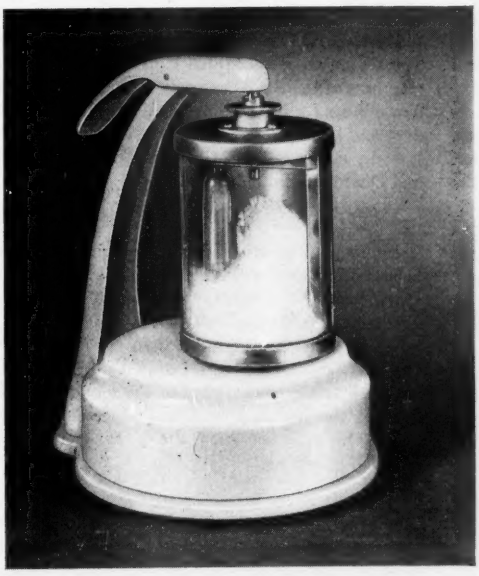

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COLLEGES

Temple University formally dedicated its new School of Pharmacy facilities on September 30 and October 1, with many of the outstanding leaders in the profession participating in the ceremonies which were spaced over two days.

Dr. Edward C. Elliott, director of the Pharmaceutical Survey, was the principal speaker at convocation exercises on the first day. Dr. Robert L. Johnson, Temple president conferred honorary degrees of doctor of science on Dr. Elliott, Frank F. Law, vice-president of Wyeth, Inc., and a member of the university's board of trustees, and George W. Merck, president of Merck & Co., Inc.

Dr. Ernest Little, president of the AMERICAN PHARMACEUTICAL ASSOCIATION; Dr. J. Lester Hayman, president, Association American Colleges of Pharmacy, and Carson P. Frailey, secretary, American Drug Manufacturers Association participated in a symposium on "The Pharmaceutical Survey."

George W. Merck and John W. Dargavel, secretary of the National Association of Retail Druggists, were the principal speakers at the alumni dinner. Dr. Johnson and Dr. H. Evert Kendig, dean of the Temple Pharmacy School, were other speakers.

On the following day, Dr. Robert P. Fischelis, secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION, was the principal speaker at a convocation for the students of the pharmacy school.

At the October meeting of the Alumni Association of the **Brooklyn College of Pharmacy,** Irving Rubin, the outgoing president and associate editor of *American Druggist,* reviewed the progress made by the Association under a plan of "Group Thinking and Group Action" which has been in effect the past two years. The Association now has more than 1200 active members. John Calderone is the newly elected president.

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The Board of Regents of **Oklahoma University** has named Professor Ralph Bienfang assistant to the dean of the School of Pharmacy.

The **Oregon State College School of Pharmacy** recently celebrated its 50th anniversary with a two-day program which included open meetings of the North Pacific and student branches of the AMERICAN PHARMACEUTICAL ASSOCIATION and also of the Oregon State Pharmaceutical Association. Dean G. E. Crossen delivered the principal address entitled "Viewing the Future." A feature of the opening day's program was an evening performance of the Black Hills Passion Play.

In Pittsburgh on November 1, distinguished leaders in American pharmacy participated in the formal opening of the George A. Kelly, Sr., model professional pharmacy recently completed on the **Duquesne University** campus.

At an afternoon session, Miss Eleanor P. Kelly, president of the George A. Kelly Co., wholesale druggists of Pittsburgh, presented the pharmacy to the Very Reverend Francis P. Smith, C.S.Sp., president of Duquesne University. The principal addresses were made by Dr. Justin L. Powers, Washington, D. C., chairman of the National Formulary Committee and editor of the *Scientific Edition* of THIS JOURNAL; and by Dr. Arthur Purdum, chief pharmacist at the Johns Hopkins Hospital, Baltimore, Md., and president of the American Society of Hospital Pharmacists.

Dr. Ernest Little, president of the AMERICAN PHARMACEUTICAL ASSOCIATION, spoke on "What's Ahead in Pharmacy?" at the banquet which concluded the exercises.

•

Marking the reorganization of the Board of Trustees of the **Cincinnati College of Pharmacy**, members of the Board recently elected the following new officers for the school: Ralph B. Vinross, president and business manager of the College; Rudolph L. Puls, vice-president; Charles F. Henke, secretary, and David R. Uhlfelder, treasurer.

A new plan for counseling freshman students has been devised by the A. Ph. A. student branch at the **University of Georgia School of Pharmacy.** Eighteen outstanding members of the senior pharmacy class have been selected to act as counselors and advisers to the freshmen. Under this "big-brother" arrangement, each of the senior counselors will aid the freshman students assigned to him to become acquainted with the profession and the ethics of pharmacy.

Students studying hospital pharmacy at **Howard College (Ala.)** will hear seven visiting lecturers this semester. Dr. C. Lee Huyck, head of the Department of Pharmacy, states that "the special course in hospital pharmacy was begun two years ago to mee the growing demand of trained people in this field.

ASSOCIATIONS

A headquarters building for the **Maryland Pharmaceutical Association,** to be erected in Baltimore and dedicated as a memorial to the late Dr. E. F. Kelly, was proposed at the 66th annual meeting of the Association. An architect's drawing of the proposed building and tentative plans for financing the building were outlined in a report by Dr. H. A. B. Dunning, who envisioned a two-story building costing in the neighborhood of $50,000. Dr. Kelly, was for many years secretary of the state association and later secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Officers elected by the **Richmond (Va.) Retail Druggists Association** for the current year are J. W. Chamblee, president; R. L. Booker, Jr., vice-president; J. F. Hollenbeck, secretary, and F. E. Parker, treasurer.

A resolution approving any proposed legislation that would bar communists from the licensed professions has been adopted by the executive committee of the **Wisconsin Pharmaceutical Association.** The announcement was made by Jennings Murphy, executive secretary of the Association, who said the committee had decided to discuss the subject following the approval of such a proposal by other Wisconsin professional and patriotic organizations.

A series of local instructional courses for the training of drugstore personnel is being conducted by the **Texas Pharmaceutical Association** in cooperation with the Department of Distributive Education of the University of Texas. The program is under the supervision of Clark C. Cramer, drug training specialist for the Association. Most of the courses are planned to extend over ten class hours.

William H. Whitman has been elected executive secretary of the **Allegheny County (Pa.) Retail Druggists Association.**

Dean H. G. Hewitt of the University of Connecticut College of Pharmacy was the principal speaker at the opening meeting of the fall season of the **Connecticut Association for the Advancement of Professional Pharmacy.** His subject was "Present and Future Problems and Plans for the College of Pharmacy."

The **American Dental Association** at its recent 89th annual meeting in Chicago, adopted a resolution "opposing the policies and methods used by the National Committee of Dentists, an affiliated organization of the National Physicians Committee." The resolution reiterated the Association's opposition to the establishment of any system of federal compulsory health insurance "as not in the best interests of the public or the dental profession." It continued, "the approach of the National Committee of Dentists to legislative problems does not conform to the legislative approach and philosophy of the American Dental Association."

New officers of the **Cincinnati Pharmaceutical Association** are Rudolph L. Puls, president; Charles F. Henke, vice-president; Ralph B. Vinross, secretary; John Sonntag, treasurer, and Joseph Schneider sergeant-at-arms.

James DePree, Holland, Mich., addressed the October meeting of the **Cambria-Somerset (Pa.) Pharmaceutical Association** on the subject of recent vitamin research activities.

Antihistamine Therapy

. . . . . from p. 737

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N. A. R. D. Celebrates Golden Jubilee

Fair trade; reports of declining drugstore volume coupled with arguments for increased gross percentage margins for retail pharmacists; the need for changing the U. S. anti-trust laws so that independent pharmacists can bargain collectively with manufacturers on prices and discounts; and strengthening the professional services of retail pharmacists, were among the principal topics of discussion at the recent annual convention of the National Association of Retail Druggists.

The honor of presiding at the Golden Jubilee convention of the 50-year-old Association went to President John B. Tripeny of Casper, Wyo., who is also secretary of the Wyoming Pharmaceutical Association. The convention also marked the fifteenth year of John W. Dargavel's service to the N. A. R. D. as executive secretary.

In specific observance of the 50th anniversary celebration, a drama, in symposium form, depicting fifty years of pharmacy from 1898 to 1948, was presented by the faculty members of the Temple University School of Pharmacy with Dean H. Evert Kendig presiding. At another session, Dr. Curt P. Wimmer, Professor Emeritus of Pharmacy at Columbia University and Editor of the *New York Pharmacist*, presented a history of the association.

Dr. Robert L. Swain, editor of *Drug Topics* and *Drug Trade News* delivered the keynote address on the subject of fair trade. He stated that "it matters little how astute one may be in business matters, and how well he understands the fundamental economic philosophy essential to success, if he must be the victim of predatory competition."

At a merchandising session presided over by Keith K. Keller of Minneapolis, chairman of the N. A. R. D.'s merchandising committee, H. W. Adkins, executive vice-president of Yahr-Lange, Milwaukee wholesalers, warned that profits of many retail pharmacists could be wiped out by a slight fall in volume. This condition was attributed to increased operating costs plus static business volume. It was Mr. Adkins' opinion that "many retail price structures must be increased in order to provide for the increased dollar sales volume which may be so desperately needed." He further declared that drugstore margins cannot be increased without raising consumer prices and cited figures to show that increased margins cannot come out of the profits of wholesalers or manufacturers.

President Tripeny, Secretary Dargavel and the N. A. R. D.'s executive committee all called for amendments to the U. S. anti-trust laws which would permit independent pharmacists to bargain collectively with manufacturers on prices and discounts.

Dr. Ernest Little, president of the AMERICAN PHARMACEUTICAL ASSOCIATION, stated in his address, entitled "Strengthening the Professional Services of the Retail Pharmacist," that adequate help is now available to the retail pharmacist from a variety of sources to strengthen his professional activities. Most pharmacists are making full use of such assistance, said Dr. Little. He further stated that "every retail pharmacist in the United States should hold membership in his local county association, in the National Association of Retail Druggists, and in the AMERICAN PHARMACEUTICAL ASSOCIATION." The necessary expense involved in maintaining such membership is not large and offers an insurance of professional future which pharmacists can hardly afford to neglect, Dr. Little pointed out.

Included in the resolutions adopted was one condemning the practice of wholesale price increases by those manufacturers who fail to establish corresponding proportionate discount increases to retailers sufficient to meet the present rises in the cost of doing business.

Officers elected for the 1948–1949 fiscal year are as follows: Edgar L. Bellis, New York, president; G. W. Eisele, Arkansas, 1st vice-president; A. C. Mayerson, Illinois, 2nd vice-president; James Dansberry, Colorado, 3rd vice-president; John McKeighan, Michigan, 4th vice-president; John Veenker, Iowa, 5th vice-president. John W. Dargavel and Clem Czerwinski were both reelected secretary and treasurer, respectively, of the Association.

Named to three-year terms on the N. A. R. D. executive committee were E. W. Gibbs, Alabama, and H. E. Henderson, Washington.

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Be prepared for disaster by adequate insurance. Insure in the best company—at the right cost—with better service.

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THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

CALIFORNIA

Davis, Waite H., Santa Ana
Herndon, Grace, Long Beach
Mogol, Sidney, Los Angeles
Sister Mary C. Aherne, San Bernardino
Sobel, Elliott, Tujunga
Staulz, Stanley A., Jr., San Diego

CONNECTICUT

Yablonicky, Joseph M., Bridgeport

DISTRICT OF COLUMBIA

Peskin, David, Washington

IDAHO

Whitby, Herbert L., Boise

ILLINOIS

Mularz, Virginia, Chicago
Shore, Lee, Westchester

INDIANA

Krieger, William H., Terre Haute

KENTUCKY

Thomas, Emmett N., Fort Knox

MARYLAND

Worden, Lloyd G., Baltimore

MICHIGAN

Burley, Nelson J., Detroit

MISSOURI

Branard, Ethyl, Kansas City

NEW JERSEY

Eisenhower, James S. D., Wildwood
Frick, Florence S., Elizabeth
Leist, Jan, Lyons
Miraglia, John A., Cliffside Park
Silk, Ruth D., Arlington
Ziff, Charles B., Hasbrouck Heights

NEW YORK

Reed, Chan J., Oswego
Rubens, Harry M., Rochester

OHIO

Kinross, Ralph B., Cincinnati
Trevis, Margaret N., Cleveland
Warner, William D., Akron

PENNSYLVANIA

Adams, John G., Pittsburgh
Manzelli, Thomas A., Philadelphia

UTAH

Hood, Edith C., Tooele

VIRGINIA

Pflug, Solomon C., Portsmouth
Rapoport, G. H., Portsmouth

WASHINGTON

Bloedle, Claude H., Seattle

WISCONSIN

Ellis, Lillian H., Milwaukee

FOREIGN

Labow, William R., Montreal, Que., Canada

U. S. POSSESSIONS

Llorens, Washington, San Juan, Puerto Rico

Deceased Members

Agnew, Benjamin S., New Castle, Pa., Apr. 15, 1948

Briggin, George, Staten Island, N. Y., 1947

DuMez, Andrew G. (a life member), Baltimore, Md., Sept. 27, 1948

Graybill, John R., Galax, Va.

Jakubczak, Henry, Perth Amboy, N. J., July 7, 1947

Johnston, Stillman B., Fresno, Calif.

Lemelson, Lemuel M., Brooklyn, N. Y.

Smith, Wallace J., Baltimore, Md.

Sterling, R. W., Dixon, Ill., July, 1948

Sumner, Walter H., Nettleton, Miss., July 16, 1948

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INFORMATION SERVICE

Members of the American Pharmaceutical Association are invited to submit their professional problems to the Journal, 2215 Constitution Ave., N. W., Washington 7, D. C., giving all pertinent details. Advisory service is provided by the A. Ph. A. library and technical staff and the Journal panel of technical consultants.

SOURCE OF SHOW GLOBES

Can you supply us with the name and address of a firm marketing show globes?—J. S., Kansas.

It is our understanding that the Spring Valley Glass Co., Huntington, W. Va., is manufacturing replicas of various types of show globes.

DIGESTANT FOR DRY CLEANING

The owner of a dry-cleaning establishment has asked us to obtain information on a digestant which he states is called Rhyzyme P.F. Can you help us?—O. G., California.

We are unable to locate a source of a product called "Rhyzyme P.F." However, there is a saccharifying enzyme available under the name "Rhozyme" which is used by dry cleaners. This product is manufactured by the Rohm and Hass Co., 226 W. Washington Sq., Philadelphia 5.

TREATMENT OF SCABIES

Where can we obtain the chemical 1,2,3,4,5,6-hexachlorocyclohexane? I understand its gamma isomer has been used in a 1% water-washable base for the treatment of scabies.—K. R., Michigan.

According to the information we have, the following companies will supply the chemical 1,2,3,4,5,6-hexachlorocyclohexane: The Dow Chemical Co., Midland, Mich.; E. I. du pont de Nemours, Inc., Wilmington, Del.; and the Hooker Electrochemical Co., Niagara Falls, N. Y. An article relating to the use of the gamma isomer of this chemical in an ointment for the treatment of scabies appeared in the May, 1948, issue of the *Journal of Investigative Dermatology*, page 363. Also, an ointment of this compound is marketed under the name "Kwell Ointment" by Commercial Solvents Corp.

COLLOIDAL CRUDE COAL TAR

We are interested in knowing where we can obtain colloidal crude coal tar.—H. S., Connecticut.

Since any crude coal tar is probably colloidal in nature it is not exactly clear what you have in mind. We have been unable to locate any particular brand of coal tar listed under the name "Colloidal Crude Coal Tar." There are, however, a large number of concerns which supply coal tar and coal-tar chemicals. Among these are The Coal Tar Chemicals Corp., 420 Lexington Ave., New York 17, N. Y., and The Interlake Chemical Corp., Union Commerce Bldg., Cleveland 14, Ohio.

"TESTRON" OR "TESTRONE?"

Can you give me any information about a tablet called "Testron" which is used for arthritis?—J. N., Massachusetts.

We have been unable to locate any information on "Testron." In the American

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Druggist Red Book, however, we do find "Testrone" listed. This product is manufactured and distributed by the E. S. Miller Laboratories, Inc., 743 Maple Ave., Los Angeles 14, Calif. It is our understanding that Testrone is the trade-mark name of the Miller Laboratories for an injectable dosage form of testosterone.

PROCUREMENT OF RADIOACTIVE COMPOUNDS

Is it possible for us to obtain radioactive phosphorus and iodine?—C. D., Athens, Greece.

The distribution of all radioactive compounds is carefully controlled by the Atomic Energy Commission, Washington, D. C. Radioactive materials including radioactive phosphorus and iodine are distributed for experimental purposes only, to a very limited number of experienced investigators. It is therefore quite doubtful that you would be able to obtain these materials from the United States at this time.

STABILITY OF SODIUM FLUORIDE DENTAL SOLUTION

Please supply me with any information you may have concerning preparation of a sodium fluoride solution for use in dental practice. Also any information relative to the stability of such a solution.—C. S., West Virginia.

According to officials of the Dental Research Division of the National Institute of Health, on the basis of present evidence it is preferable to use a straight 2% solution of sodium fluoride without consideration of *p*H. It is believed that such a solution is stable but that it should be stored in a Pyrex or other glass bottle of high resistance.

WHY "LIGHT-RESISTANT CONTAINERS?"

Can you tell me just what takes place in a tincture when not stored in a light-resistant container? What colors other than amber are known to be light resistant?—E. R., Oklahoma.

Although it is impossible to give a complete answer to your question, experience has shown that tinctures not stored in light-resistant containers deposit precipitates much more quickly than those stored in amber-colored bottles or in bottles protected from light. For further information, we would suggest that you read the article entitled "The Causes of Precipitation in Tinctures and Fluidextracts" by Wilbur L. Scoville, which was published in the December, 1927, issue of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION. It is our understanding that the most effective light-resistant glass is that which is amber in color.

DIHYDROERGOTAMINE

Do you have information concerning a new ergotamine salt, other than ergotamine tartrate, which is used in treating migraine headaches?—J. L., California.

The drug to which you refer is probably dihydroergotamine (D.H.E. 45). This drug is a derivative of ergotamine and its chemical name is dihydroergotamine methanesulfonate. It is manufactured by the Sandoz Chemical Works, Inc., 70 Charlton St., New York, N. Y. The manufacturer recommends it for use in aborting attacks of migraine and for other nonobstetrical indications where sympathicolytic action is desired and ergotamine is poorly tolerated.

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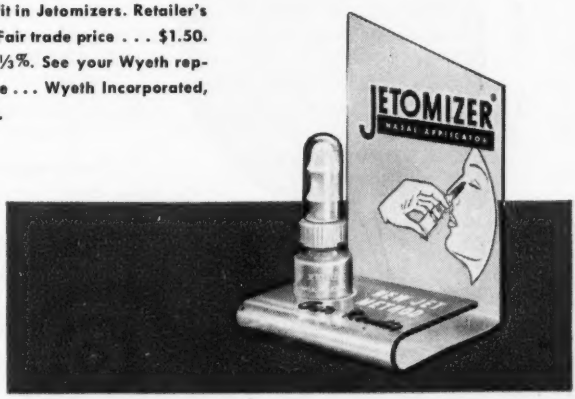

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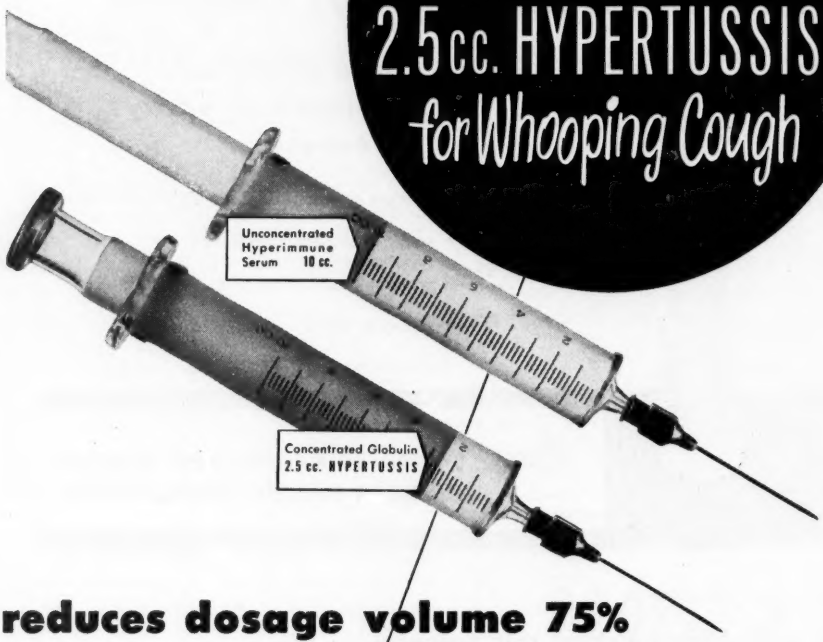

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November—December
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ERRATA—VOLUME IX

Page 231, line 1: The tradename for butabarbital sodium, as supplied by the McNeil Laboratories, should read: "Butisol Sodium—McNeil."

Page 266, fourth line from bottom should read: Eli Lilly & Co. (instead of Abbott Laboratories) with reference to "Duracillin".

Page 689, item entitled "Admitted to N.F.?" Reference to Crysticillin should read "procaine penicillin G for *aqueous* injection," *not* "in *oil*."

Tax Responsibilities

.....from p. 725

sumers of no tax on sales 1 cent to 14 cents. On sales 15 cents to 42 cents the tax collection from consumers is 1 cent; 43 cents to 73 cents, 2 cents; 74 cents to $1.12, 3 cents; $1.13 to $1.49, 4 cents, and so on. The resulting tax collections are split one-sixth to the city and five-sixths to the state, with a minimum of $^1/_2\%$ of taxable sales to the city and $2^1/_2\%$ to the state.

Most states and municipalities have adopted compensating use taxes in an effort to discourage purchases outside the taxing area. The use tax applies to goods brought into the taxing area for personal or business use. The financial records characteristic of well-managed wholesale and retail businesses in the drug trade have been found to be sufficient for tax auditors to make an assessment for any unpaid use tax liability that has accrued. Use tax liability of substantial amount may arise in the purchase of fixtures and equipment and of office supplies. In a number of states and localities, store supplies are exempted from both the sales tax and the use tax. Otherwise they are also subject to one or the other of these taxes.

Gross Receipts Taxes

The gross receipts taxes are distinguished from the sales taxes in that no provision is made for consumer collection. The gross receipts taxes are privilege taxes on the business of retailing or wholesaling. In the drug trade the chief complication in accounting for these taxes arises from the specified exemptions. Characteristically, some manufacturing is carried on both by wholesalers and by retailers in this trade. Receipts from such sales are not to be considered, therefore, as subject to the privilege tax on wholesaling or retailing.

The rates of gross receipts taxes range from $^1/_{20}\%$ to 1%. They are applicable without regard to the degree of profitableness of the business. They apply even if the business is being operated at a loss. This emphasizes the importance of satisfactory establishment of allowable deductions from gross receipts.

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